

**CITY OF NEWTON
PURCHASING DEPARTMENT**

***CONTRACT FOR PUBLIC WORKS - UTILITIES DIVISION
(M.G.L. Ch. 30, Sec. 39m)***

**PROJECT MANUAL:
#1 PUMP REPLACEMENT AT
LONGFELLOW ROAD PUMP STATION
INVITATION FOR BID #10-14
*(Rebid for IFB# 10-03)***

**SEPTEMBER 2009
David B. Cohen, Mayor**

CITY OF NEWTON
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#1 PUMP REPLACEMENT AT
LONGFELLOW ROAD PUMP STATION

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END OF SECTION

**CITY OF NEWTON
PURCHASING DEPARTMENT
INVITATION FOR BID# 10-14**

The City of Newton invites sealed bids from Contractors for

#1 PUMP REPLACEMENT AT LONGFELLOW RD. PUMP STATION

Bids will be received until: 10:00 a.m. on October 1, 2009

at the Purchasing Department, Room 204, Newton City Hall, 1000 Commonwealth Ave., Newton, MA 02459. Immediately following the deadline for bids all bids received within the time specified will be publicly opened and read aloud.

The work under this contract shall consist of: remove and replace existing wastewater pump and motor #1 at the Longfellow Road Pump Station, Newton, MA and all appurtenances as specified.

There will be no charge for contract documents. All bids must be accompanied by a bid deposit in an amount that is not less than five percent (5%) of the value of the bid, including all add alternates. **All bids must be submitted with one ORIGINAL and one COPY.**

Project Manual will be available online at www.ci.newton.ma.us/bids or for pickup at the Purchasing office after 10:00 a.m., September 17, 2009.

All bids are subject to the provisions of M.G.L. Chapter 30, Section 39M. **Wages are subject** to minimum wage rates determined by the Massachusetts Department of Labor and Industries pursuant to M.G.L. Chapter 149, Sec. 26 to 27H. The schedule of wage rates applicable to this contract is included in the bidding documents. In addition, the prevailing wage schedule will be updated annually for all public construction projects lasting longer than one (1) year. You will be required to pay the rates set out in any updated prevailing wage schedule. Increases in prevailing wage schedules will not be the basis for change order requests. The successful bidder will be required to provide a Certificate of Insurance demonstrating current coverage of the type and amounts set forth in the Project Manual. The successful bidder will be required to furnish a **Labor and Materials Payment Bond in the amount of 50%** of the contract total.

Award will be made to the bidder with the lowest responsive and eligible bid.

The term of the contract shall **extend for twelve (12) months from day of contract execution.**

It is the sole responsibility of the contractor downloading these bids to ensure they have received any and all addenda prior to the bid opening. Addenda's will be available online www.ci.newton.ma.us/bids within the original bid document as well as a separate file. If you download bids from the internet site and would like to make it known that your company has done so, you may fax the Purchasing dept. (617) 796-1227 or email purchasing@newtonma.gov with your NAME, ADDRESS, PHONE, FAX **AND INVITATION FOR BID NUMBER..**

The City of Newton's Purchasing Dept. will convert to an email notification system of all upcoming public bids effective July 1, 2009. If you wish to receive notification of bids, please email us your company information to purchasing@newtonma.gov , otherwise you may view all City of Newton public bids online at www.ci.newton.ma.us/bids .

The City of Newton will reject any and all bids when required to do so by the above referenced General Laws. In addition, the City of Newton reserves the right to waive any informalities in any or all bids, or to reject any or all bids in whole or in part, if it be in the public interest to do so.

CITY OF NEWTON

Re Cappoli
Chief Procurement Officer

September 17, 2009

**CITY OF NEWTON
DEPARTMENT OF PURCHASING
INSTRUCTIONS TO BIDDERS**

ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each General Bidder (hereinafter called the "Bidder") by making a bid (hereinafter called "bid") represents that:
1. The Bidder has read and understands the Contract Documents and the bid is made in accordance therewith.
 2. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.
- 1.2 Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the bid as submitted.

ARTICLE 2 - REQUEST FOR INTERPRETATION

- 2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 2.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the *Chief Procurement Officer*, at purchasing@newtonma.gov or via facsimile (617) 796-1227. The City will answer such requests if received seven (7) calendar days before the date for receipt of the bids.
- 2.3 Interpretation, correction, or change in the Contract Documents will be made by Addendum which will become part of the Contract Documents. The City will not be held accountable for any oral instruction.
- 2.4 Addenda will be emailed, to every individual or firm on record as having taken a set of Contract Documents.
- 2.5 Copies of addenda will be made available for inspection at the location listed in the Invitation for Bids where Contract Documents are on file, in addition to being available online at www.ci.newton.ma.us/bids.
- 2.6 Bidders downloading information off the internet web site are solely responsible for obtaining any addenda prior to the bid opening. If the bidder makes themselves known to the Purchasing Dept., at purchasing@newtonma.gov or via facsimile (617) 796-1227, they shall be placed on the bidder's list. Bidders must provide the Purchasing dept. with their company's name, street address, city, state, zip, phone, fax and **INVITATION FOR BID NUMBER# 10-14**.

ARTICLE 3 - MBE PARTICIPATION

- 3.1 By bidding on this project each Bidder certifies its intent to comply with the City of Newton Minority/Women Business Enterprise Plan dated December 1999 to further expand business opportunities for minority firms. A copy of this plan is incorporated in the Project Manual.
- 3.2 Bidders are advised that the City of Newton Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program is applicable to all construction contracts in excess of \$50,000.00. A copy of this program is incorporated in the Project Manual. A Contractor's Certification form must be signed by all successful low bidders prior as a condition of contract award. No contract shall be executed or valid unless the contractor has executed and submitted the Contractor's Certification. (see Attachment B to the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program.)
- 3.3 The awarded bidder shall, prior to the award of any sub-contract, obtain from each of its sub-contractors the Sub-Contractors Certification certifying the Sub-Contractor shall comply with the minority manpower ratio and specific affirmative action steps described in the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program contained in the Project Manual. (see Attachment C to the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program.)

ARTICLE 4 - PREPARATION AND SUBMISSION OF BIDS

- 4.1 Bids shall be submitted on the "Bid Form" as appropriate, furnished by the City.
- 4.2 All entries on the Bid Form shall be made by typewriter or in ink.
- 4.3 Where so indicated on the Bid Form, sums shall be expressed in both words and figures. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control.
- 4.4 Bid Deposits shall be submitted in the amount specified in the Invitation for Bids. They shall be made payable to the City of Newton and shall be either in the form of cash, certified check, treasurer's or cashier's check issued by a responsible bank or trust company, or a bid bond issued by a surety licensed to do business in the Commonwealth of Massachusetts; and shall be conditioned upon the faithful performance by the principal of the agreements contained in the bid.
- Bid deposits of the three (3) lowest responsible and eligible Bidders shall be retained until the execution and delivery of the Owner/Contractor agreement.
- 4.5 The Bid, including the bid deposit shall be enclosed in a sealed envelope with the following plainly marked on the outside:
- * GENERAL BID FOR:
 - * NAME OF PROJECT AND INVITATION NUMBER
 - * BIDDER'S NAME, BUSINESS ADDRESS, AND PHONE NUMBER
- 4.6 Date and time for receipt of bids is set forth in the Invitation for Bids.
- 4.7 Timely delivery of a bid at the location designated shall be the full responsibility of the Bidder.
- 4.8 Bids shall be submitted with **one original and one copy**.
- 4.9 The use of a company or brand name, except with software, in the specifications is intended solely for the purpose of describing a standard of quality, functional features and performance standards required and is not intended to limit or restrict competition. The bidder offering a product which they deem equal to the brand and model specified in the solicitation provided that the brand name specified is not followed by the words "no substitutions", **shall indicate so on the bid form and Minimum Requirements – Exception form** and submit with their bid the manufacturers specifications/descriptive literature for the product they are offering. **Failure to submit manufacturers specifications/descriptive literature with bids may be cause for bid rejection.**

"Equality" - An item equal to that named or described in the specifications of the contract may be furnished by the Vendor and the naming of any commercial name, trademark or other identification shall not be construed to exclude any item or manufacturer not mentioned by name or as limiting competition but shall establish a standard of equality only. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the work being contracted for or the material being purchased; and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications. The name and identification of all materials other than the one specifically named shall be submitted to the City in writing for approval, at time of bid, use or fabrication of such items. Subject to the provisions of M.G.L., Ch. 30, Sec. 39J, approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final. The City may require tests of all materials so submitted to establish quality standards at the Vendor's expense. All directions, specifications and recommendations by manufacturers for installation, handling, storing, adjustment and operation of their equipment shall be complied with; responsibility for proper performance shall continue to rest with the Vendor.

- 4.10 Be advised that a new Massachusetts law has been enacted that required all employees who work on Massachusetts public works construction sites must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004, which will become effective July 1, 2006.
1. This requirement will apply to any general bid or sub bid submitted on or after July 1, 2006 and to any contract awarded on or after July 1, 2006.

2. This law directs the Massachusetts Attorney General to restrain the award of construction contracts to any contractor who is in violation to this requirement and to restrain the performance of these contracts by non-complying contractors.
3. The contractor and all subcontractors on this project will be required to provide certification of compliance with this requirement. Non-compliance with this new Massachusetts Law will disqualify you from bidding on public contracts.

ARTICLE 5 - ALTERNATES

- 5.1 Each Bidder shall acknowledge Alternates (if any) in Section C on the Bid Form.
- 5.2 In the event an Alternate does not involve a change in the amount of the base bid, the Bidder shall so indicated by writing "No Change", or "N/C" or "0" in the space provided for that Alternate.
- 5.3 Bidders shall enter on the Bid Form a single amount for each Alternate which shall consist of the amount for work performed by the Contractor.
- 5.4 The low Bidder will be determined on the basis of the sum of the base bid and the accepted alternates.

ARTICLE 6 - WITHDRAWAL OF BIDS

- 6.1 Any bid may be withdrawn prior to the time designated for receipt of bids on written or telegraphic request. Telegraphic withdrawal of bids must be confirmed over the Bidder's signature by written notice postmarked on or before the date and time set for receipt of bids.
- 6.2 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids.
- 6.3 No bids shall be withdrawn for sixty days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

ARTICLE 7 - CONTRACT AWARD

- 7.1 The City of Newton will award the contract to the lowest eligible and responsible Bidder within sixty days, Saturdays, Sundays, and legal holidays excluded after the opening of bids.
- 7.2 The City of Newton reserves the right to waive any informalities in or to reject any or all Bids if it be in the public interest to do so.
- 7.3 As used herein, the term "lowest responsible and eligible Bidder" shall mean the Bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who, where the provisions of section eight B of chapter twenty-nine apply, shall have been determined to be qualified thereunder.
- 7.4 It is the purpose of the City not to award this contract to any bidder who does not furnish evidence satisfactory to the Chief Procurement Officer that he has the ability and experience in this class of work and that he has sufficient capital and plant to enable him to prosecute the same successfully and to complete it within the specified time and that he will complete it in accordance with the terms thereof.
- 7.5 Subsequent to the award and within five (5) days, Saturday, Sundays and legal holidays excluded, after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the City a Contract in the form included in the Contract Documents in such number of counterparts as the City may require.
- 7.6 In the event that the City receives low bids in identical amount from two or more responsive and responsible Bidders, the City shall select the successful Bidder by a blind selection process such as flipping a coin or drawing names from a hat. The low Bidders who are under consideration will be invited to attend and observe the selection process.

ARTICLE 8 - TAXES

- 8.1 The Bidder shall not include in this bid any tax imposed upon the sale or rental of tangible personal property in this Commonwealth, such as any and all building materials, supplies, services and equipment required to complete the work.
- 8.2 The City is exempt from payment of the Massachusetts Sales Tax, and the Bidder shall not include any sales tax on its bid. The City's exemption Number is E-046-001-404.

END OF SECTION

CITY OF NEWTON
DEPARTMENT OF PURCHASING
BID FORM# 10-14

- A. The undersigned proposes to furnish all labor and materials required in accordance with the Contract Documents supplied by the City of Newton entitled:

#1 PUMP REPLACEMENT AT LONGFELLOW RD. PUMP STATION

for the contract price specified below, subject to additions and deduction according to the terms of the specifications.

- B. This bid includes addenda number(s) _____, _____, _____, _____,

- C. The proposed contract price is:

_____ DOLLARS (\$ _____).

COMPANY: _____

- D. The undersigned has completed and submits herewith the following documents:

- ☐ Bid Form - signed, 2 pages
- ☐ Bidder's Qualification Form and References - 2 pages
- ☐ 5% Bid Surety

- E. The undersigned agrees that, if s/he is selected as general contractor, s/he will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price.

The undersigned hereby certifies that s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that s/he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A of M.G.L. Chapter 30, s 39M.

The undersigned certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health

Administration (“OSHA”) that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States OSHA that is at least 10 hours in duration. The undersigned understands that any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Date _____

(Name of General Bidder)

BY: _____

(Printed Name and Title of Signatory)

(Business Address)

(City, State, Zip)

(Telephone)

/ _____
(FAX)

(E-mail address)

NOTE: If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners; if an individual, give residential address if different from business address; and, if operating as a d/b/a give full legal identity. Attach additional pages as necessary.

END OF SECTION

CITY OF NEWTON

BIDDER'S QUALIFICATIONS AND REFERENCES FORM

All questions must be answered, and the data given must be clear and comprehensive. Please type or print legibly. If necessary, add additional sheet for starred items. This information will be utilized by the City of Newton for purposes of determining bidder responsiveness and responsibility with regard to the requirements and specifications of the Contract.

1. FIRM NAME: _____
2. WHEN ORGANIZED: _____
3. INCORPORATED? ☐ YES ☐ NO DATE AND STATE OF INCORPORATION: _____
- * 4. LIST ALL CONTRACTS CURRENTLY ON HAND, SHOWING CONTRACT AMOUNT AND ANTICIPATED DATE OF COMPLETION:

- * 5. HAVE YOU EVER FAILED TO COMPLETE A CONTRACT AWARDED TO YOU?
☐ YES ☐ NO
IF YES, WHERE AND WHY?

- * 6. HAVE YOU EVER DEFAULTED ON A CONTRACT? ☐ YES ☐ NO
IF YES, PROVIDE DETAILS.

- * 7. LIST YOUR VEHICLES/EQUIPMENT AVAILABLE FOR THIS CONTRACT:

- * 8. IN THE SPACES FOLLOWING, PROVIDE INFORMATION REGARDING CONTRACTS COMPLETED BY YOUR FIRM SIMILAR IN NATURE TO THE PROJECT BEING BID. A MINIMUM OF FOUR (4) CONTRACTS SHOULD BE LISTED. PUBLICLY BID CONTRACTS ARE PREFERRED, BUT NOT MANDATORY.

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____

PUBLICLY BID? ☐ YES ☐ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLCY BID? ☐ YES ☐ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLCY BID? ☐ YES ☐ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

PROJECT NAME: _____
OWNER: _____
CITY/STATE: _____
DOLLAR AMOUNT: \$ _____ DATE COMPLETED: _____
PUBLCY BID? ☐ YES ☐ NO
TYPE OF WORK?: _____
CONTACT PERSON: _____ TELEPHONE #: (____) _____
CONTACT PERSON'S RELATION TO PROJECT?: _____
(i.e., contract manager, purchasing agent, etc.)

9. The undersigned certifies that the information contained herein is complete and accurate and hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Newton in verification of the recitals comprising this statement of Bidder's qualifications and experience.

DATE: _____ BIDDER: _____

SIGNATURE: _____

PRINTED NAME: _____ TITLE: _____

END OF SECTION

CONTRACT FORMS

The awarded bidder will be required to complete and submit the following documents in order to execute a contract pursuant to this bid.

The forms are provided for informational purposes only.

None of the following forms are required at the time of bid submittal.

CITY-CONTRACTOR AGREEMENT

CONTRACT NO. C-

THIS AGREEMENT made this ____ day of _____ in the year Two Thousand and Nine by and between the CITY OF NEWTON, a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, hereinafter referred to as the CITY, acting through its Chief Procurement Officer, but without personal liability to him, and

hereinafter referred to as the CONTRACTOR.

The parties hereto for the consideration hereinafter set forth agree as follows:

ARTICLE 1. STATEMENT OF WORK. The Contractor shall furnish all labor, materials, and equipment and perform all work required in strict accordance with the Contract Documents for the following project:

#1 PUMP REPLACEMENT AT LONGFELLOW ROAD PUMP STATION

ARTICLE 2. TIME OF COMPLETION. The Contractor shall commence work under this Contract on the date specified in the written notice of the City to proceed and shall fully complete all work hereunder within the time specified in the Summary of Work and Specific Work Requirements of the Project Manual. Time is of the essence with regard to this contract. Failure to complete within the time specified shall be subject to the assessment of liquidated damages in accordance with the provisions contained in the Project Manual.

ARTICLE 3. THE CONTRACT PRICE. The City shall pay the Contractor for the full and satisfactory performance of the Contract a sum not to exceed:

ARTICLE 4. CONTRACT DOCUMENTS. The Contract Documents consist of the following documents which are either attached to this Agreement or are incorporated herein by reference:

- a. This CITY-CONTRACTOR Agreement;
- b. The City's Invitation For Bid #10-14 issued by the Purchasing Department;
- c. The Project Manual for **#1 Pump Replacement at Longfellow Rd. Pump Station** including the Instructions to Bidders; General Conditions; Special Conditions; MWBE/AA Requirements, Wage Rate Requirements and Wage Rate Schedule(s) including any updated prevailing wage rate schedules if applicable; The Supplementary Special Conditions; General Requirements and Project Specifications; and Drawings, if included or referenced therein;
- d. Addenda Number(s)____ ;
- e. The Bid Response of the CONTRACTOR submitted for this Project and accompanying documents and certifications;
- f. Certificate(s) of Insurance and surety bond(s) submitted by the CONTRACTOR in connection with this Project;
- g. Duly authorized and executed Amendments, Change Orders or Work Orders issued by the CITY after execution of this CITY-CONTRACTOR Agreement.

This CITY-CONTRACTOR Agreement, together with the other documents enumerated in this Article, constitute the entire Agreement between the CITY and the CONTRACTOR.

ARTICLE 5. ALTERNATES. The following Alternates have been accepted and their costs are included in the Contract Price stated in Article 3 of this Agreement:

Alternates: N/A

ARTICLE 6. APPLICABLE STATUTES. All applicable federal, state and local laws and regulations are incorporated herein by reference and the Contractor agrees to comply with same.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed under seal the day and year first above written.

CONTRACTOR

CITY OF NEWTON

By _____
Title _____

By _____
Chief Procurement Officer

Date _____

Date _____

Affix Corporate Seal Here

By _____
Commissioner of Public Works

Date _____

City funds in the amount of \$20,000
are available in account number
27A401Y3-586010

Approved as to Legal Form and
Character

By _____
Associate City Solicitor

Date _____

I further certify that the Mayor is
authorized to execute contracts and
approve change orders

By _____
Comptroller of Accounts

CONTRACT AND BONDS APPROVED

Date _____

By _____
David B. Cohen, Mayor

Date _____

CERTIFICATE OF AUTHORITY - CORPORATE

1. I hereby certify that I am the Clerk/Secretary of _____
(insert full name of Corporation)
2. corporation, and that _____
(insert the name of officer who signed the **contract and bonds.**)
3. is the duly elected _____
(insert the title of the officer in line 2)
4. of said corporation, and that on _____
(insert a date that is ***ON OR BEFORE*** the date the officer signed the **contract and bonds.**)

at a duly authorized meeting of the Board of Directors of said corporation, at which all the directors were present or waived notice, it was voted that

5. _____ the _____
(insert **name** from line 2) (insert **title** from line 3)

of this corporation be and hereby is authorized to execute contracts and bonds in the name and on behalf of said corporation, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this corporation's name and on its behalf, with or without the Corporate Seal, shall be valid and binding upon this corporation; and that the above vote has not been amended or rescinded and remains in full force and effect as of the date set forth below.

6. ATTEST: _____ *AFFIX CORPORATE
SEAL HERE*
(Signature of **Clerk or Secretary**)*
7. Name: _____
(Please print or type name in line 6)*
8. Date: _____
(insert a date that is ***ON OR AFTER*** the date the officer signed the **contract and bonds.**)

* The name and signature inserted in lines 6 & 7 must be that of the Clerk or Secretary of the corporation.

ATTESTATION

Pursuant to MG c. 62C, § 49A, the undersigned acting on behalf of the Contractor, certifies under the penalties of perjury that, to the best of the undersign's knowledge and belief, the Contractor is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.*

**Signature of Individual
or Corporate Contractor (Mandatory)

*** Contractor's Social Security Number
(Voluntary) or Federal Identification Number

By: _____
Corporate Officer
(Mandatory, if applicable)

Date: _____

* The provision in the Attestation relating to child support applies only when the Contractor is an individual.

** Approval of a contract or other agreement will not be granted unless the applicant signs this certification clause.

*** Your social security number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended. This request is made under the authority of GL c. 62C, § 49A.

CITY OF NEWTON, MASSACHUSETTS

PAYMENT BOND

Know All Men By These Presents:

That we, _____, as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the City of Newton as Obligee, in the sum of _____ dollars (\$ _____) to be paid to the Obligee, for which payments well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said PRINCIPAL has made a contract with the Obligee, bearing the date of _____, 20____, for the construction of _____ in Newton, Massachusetts.
(Project Title)

Now, the conditions of this obligation are such that if the PRINCIPAL and all Sub-contractors under said contract shall pay for all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the SURETY of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c. 30, sec. 39A, and M.G.L. c. 149 sec. 29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force, virtue and effect.

In Witness Whereof, the PRINCIPAL and SURETY have hereto set their hands and seals this _____ day of _____, 20____.

PRINCIPAL

SURETY

BY _____
(SEAL)

BY _____
(ATTORNEY-IN-FACT) (SEAL)

(Title)

ATTEST: _____

ATTEST: _____

END OF SECTION

CITY OF NEWTON

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

1.0 DEFINITIONS

1.1 THE CONTRACT DOCUMENTS

The term "Contract Documents" sometimes also referred to as the "Contract", means the contract entered into between the City of Newton (hereinafter "City") and the Contractor. It includes the Invitation for Bid, General Bid Form, Contract Form, these General Conditions of the Contract, Supplements and Amendments to the General Conditions (if any), Contract Specifications, Drawings, all addenda issued prior to execution of the contract, the Bid Bond, the Labor and Material Payment Bond, or other assurances of completion, the applicable wage rate determinations, and other documents listed in the Agreement and modifications issued after execution of the contract.

1.2 THE WORK

The term "Work", sometimes also referred to as the "Project", means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligation.

1.3 OWNER

The term "Owner" is the City of Newton.

1.4 CONTRACT OFFICER

The term "Contract Officer" means the person appointed by the Owner to administer the terms of the Contract between the Owner and the Contractor, who is also empowered to take certain actions under this Agreement.

1.5 CONTRACTOR

1.5.1 The Contractor, sometimes referred to as the General Contractor, is the person or entity identified as such throughout the Contract Documents as if singular in number. The term Contractor means the Contractor or its authorized representative.

1.5.2 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under the Contract.

1.6 SUBSTANTIAL COMPLETION

The term "Substantial Completion" means the value of the work remaining to be performed by the Contractor is, in the estimate of the awarding authority, less than one percent (1%) of the original contract price.

2.0 CONTRACT ADMINISTRATION

2.1 PRE-CONSTRUCTION CONFERENCE

2.1.1 Prior to commencement of the Work, the Contractor shall meet in conference with representatives of the Owner regarding the Owner's requirements under the Contract for administration of the quality assurance program, safety program, labor provisions, the schedule of work, and other Contract procedures.

2.1.2 The Contractor shall begin work upon receipt of a written Notice to Proceed from the Contract Officer or designee. The Contractor shall not begin work prior to receiving such notice.

2.2 CONTRACT PERIOD

The Contractor shall complete all work required under this contract within the timeframe specified elsewhere in this document, or within the time schedule established in the notice to proceed issued by the Contracting Officer.

2.3 REJECTION OF DEFECTIVE MATERIALS AND WORK

The Owner's inspection of the Work shall not relieve the Contractor of any of its responsibilities to fulfill the Contract obligations, and defective work shall be corrected without cost to the Owner. Unsuitable work may be rejected by the Owner, notwithstanding that such work and materials have been previously overlooked or misjudged by the Owner and accepted for payment. If the Work or any part thereof shall be found defective at any time before the final acceptance of the whole Work, the Contractor shall forthwith correct such defect in a manner satisfactory to the Owner, and if any material brought upon the site for use in the Work, or selected for the same, shall be rejected by the Owner as unsuitable or not in conformity with the Contract requirements, the Contractor shall forthwith remove such materials from the vicinity of the Work.

2.4 CHANGES

2.4.1 All changes in the work including any increase, decrease, or other equitable adjustment in the Contract price or in the time for performing the Contract, shall be authorized in writing by the Owner and/or Contract Officer prior to commencement.

2.5 PAYMENTS

2.5.1 CONTRACT PRICE

The Contract Price is stated in the Contract Form, and including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

2.6 APPLICATIONS FOR PAYMENT

2.6.1 Once each month, on a date established by the Owner at the beginning of the Work, the Contractor shall deliver to the Owner an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment as the Owner may require, and reflecting a minimum of 5% retainage until the final acceptance and payment by the Owner.

2.6.2 The Owner shall make payment to the Contractor within 30 days of receipt of said application, less any applicable retainage.

2.6.3 The Owner may make changes in any application for payment submitted by the Contractor for:

- i. Retention based on the value of its claims against the Contractor,
- ii. Retention of 5% of the approved amount of the Application for Payment.

2.7 FINAL PAYMENT

The acceptance by the Contractor of the last payment due under this Contract or the execution of the Final Certificate of Completion, shall operate as a release to the Owner from all claims and liability related to this Contract.

2.8 GUARANTY AND WARRANTY

2.8.1 WARRANTY

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

2.8.2 GENERAL GUARANTY

If at any time during the period of one (1) year from the date of Substantial Completion of the Work to be performed under this Contract, any part of the Work shall, in the reasonable determination of the Owner, require replacing or repairing due to the fact that it is broken, defective, or otherwise does not conform to the Contract Documents, the Owner will notify the Contractor to make the required repairs or replacement. If the Contractor shall neglect to commence such repairs or replacement to the satisfaction of the Owner within ten (10) days from the date of giving or mailing such notice, then the Owner may employ other persons to make the same. The Contractor agrees, upon demand, to pay to the Owner all amounts which the Owner expends for such repairs or replacements. During this one year guarantee period any corrective work shall be performed in accordance with the applicable terms of this Contract. For items of work completed after use and occupancy has been taken, the one year guarantee shall commence at the time the Owner accepts such items. This one year guarantee shall not limit any express guaranty or warranty provided elsewhere in the Contract.

2.9 INSURANCE REQUIREMENTS

2.9.1 The Contractor shall provide insurance coverage as listed below. This insurance shall be provided at the Contractor's expense and shall be in full force and effect during the full term of this Contract.

WORKER'S COMPENSATION

Worker's Compensation: Per M.G.L. c.. 149, s. 34 and c.. 152 as amended.

COMMERCIAL GENERAL LIABILITY

Personal Injury	\$500,000 each occurrence \$1,000,000 aggregate
Property Damage	\$500,000 each occurrence \$1,000,000 aggregate

VEHICLE LIABILITY

Personal Injury	\$500,000 each person \$1,000,000 aggregate
Property Damage	\$300,000

2.9.2 OWNER AS CO-INSURED

The Owner shall be named as additional insureds on the Contractor's Liability Policies.

2.9.3 CERTIFICATES OF INSURANCE, POLICIES

- i. The Contractor shall not commence the work until proof of compliance with this Section 2.9 has been furnished to the Owner by submitting one copy of a properly endorsed insurance certificate issued by a company authorized to write insurance in the Commonwealth. This certificate shall indicate that the contractual liability coverage is in force.
- ii. The Contractor shall file the original and one certified copy of all policies with the Owner within fifteen (15) days after contract award. If the Owner is damaged by the Contractor's failure to maintain such insurance and to so notify the Owner, then the Contractor shall be responsible for all reasonable costs attributable thereto.

2.9.4 CANCELLATION

Cancellation of any insurance required by this contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and Owner at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

2.10 INDEMNIFICATION

The Contractor shall take all responsibility for the Work and take all precautions for preventing injuries to persons and property in or about the Work; shall bear all losses resulting to or on account of the amount or character of the Work. The Contractor shall pay or cause payment to be made for all labor performed or furnished and for all materials used or employed in carrying out this Contract. The Contractor shall assume the defense of, and indemnify and save harmless the Owner, and the Owner's officers and agents from all claims relating to labor performed or furnished and materials used or employed for the Work; to inventions, patents and patent rights used in and in doing the Work unless such patent infringement is due to a product or process specified by the Owner; to injuries to any person or corporation received or sustained by or from the Contractor and any employees, and subcontractors and employees, in doing the work, or in consequence of any improper materials, implements or labor used or employed therein; and to any act, omission or neglect of the Contractor and any employees therein.

2.11 BONDS

The Contractor shall provide the Owner with a performance and with a payment or labor and materials bond in the form provided by the Owner, executed by a surety company licensed by the Commonwealth of Massachusetts' Division of Insurance. Such bond shall be in an amount equal to at least one half of the Contract price unless otherwise stated in the Contract Documents. All bonds shall be accompanied by a current power of attorney.

2.12 TERMINATION

2.12.1 TERMINATION FOR CAUSE

- i. The Owner may terminate this contract for cause if it determines that any of the following circumstances have occurred:
 - a. The Contractor is adjudged bankrupt or has made a general assignment for the benefit of its creditors.
 - b. A receiver has been appointed of the Contractor's property.
 - c. All or a part of the Work has been abandoned.
 - d. The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as provided in the Contract.
 - e. The Owner has determined that the rate of progress required on the project is not being met.
 - f. The Contractor has substantially violated any provisions of this Contract.
- ii. The Owner may complete the Work, or any part thereof, and charge its expense of so completing the Work or part thereof, to the Contractor.
- iii. The Owner may take possession of and use any materials, machinery, implements and tools found upon the site of said Work. The Owner shall not be liable for any depreciation, loss or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the Project site after the Owner has no further use for them.

2.12.2 TERMINATION - NO FAULT

- i. In the event that this Contract is terminated by the Owner, prior to the completion of construction and termination is not based on a reason listed in Paragraph 2.12.1, the Contractor shall be compensated for its costs incurred on the Project, including reasonable costs of de-mobilization, covering the period of time between the last approved application for payment and the date of termination.
- ii. Payment by the Owner pursuant to Section 2.7 shall be considered to fully compensate the Contractor for all claims and expenses and those of any consultants, subcontractors, and suppliers, directly or indirectly attributable to the termination, including any claims for lost profits.

2.13 PERMITS, FEES, AND NOTICES

- 2.13.1 The Contractor shall secure and the Owner shall pay for the building permit, if required. The Contractor shall coordinate all efforts required to obtain this permit. All other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work shall be secured and paid for by the Contractor.
- 2.13.2 The Contractor shall comply with and give notices required by laws, ordinances rules, regulations, and lawful orders of public authorities bearing on performance of the Work.
- 2.13.3 If the Contractor performs Work that it knows or reasonably should know is contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

2.14 SAFETY REQUIREMENTS

- 2.14.1 The Contractor shall comply with all Federal, State, and local safety laws and regulations applicable to the Work performed under this Contract.

2.15 TEMPORARY HEATING

The Contractor shall provide and pay for temporary heating, covering, and enclosures necessary to properly protect all work materials against damage by dampness and cold, to dry out the Work, and to facilitate the completion of the Work. Any permanent heating equipment used shall be turned over to the City in the condition and at the time required by the specifications.

2.16 AVAILABILITY AND USE OF UTILITY SERVICES

- 2.16.1 The City shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the Contract. Unless otherwise provided in the Contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the City or, where the utility is produced by the City, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.
- 2.16.2 The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the Work by the City, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

2.17 DISPUTES

- 2.17.1 "Claim," as used in this section, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to the contract. A claim arising under the Contract, unlike a claim relating to the Contract, is a claim that can be resolved under a Contract clause that provides for the relief sought by the claimant. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim. The submission may be converted to a claim by complying with the requirements of this section, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.
- 2.17.2 All disputes arising under or relating to this Contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this section.
- 2.17.3 All claims by the Contractor shall be made in writing and submitted to the Contract Officer for a written decision. A claim by the City against the Contractor shall be subject to a written decision by the Contract Officer.

- 2.17.4 The Contract Officer shall, within thirty (30) days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- 2.17.5 The Contract Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the City, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within thirty (30) days after receipt of the Contract Officer's decision.
- 2.17.6 The Contractor shall proceed diligently with performance of this Contract and/or any authorized change thereof, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the Contract and/or any authorized change thereof, and comply with any decision of the Contract Officer.

2.18 LIQUIDATED DAMAGES

- 2.18.1 If the Contractor fails to complete the Work within the time specified in the contract, or any extension thereof, the Contractor shall pay to the City as liquidated damages, the sum of \$50.00 for each day of delay. If different completion dates are specified in the Contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another section in this Contract, liquidated damages shall not be due the City. The Contractor remains liable for damages caused other than by delay.
- 2.18.2 If the City terminates the Contractor's right to proceed pursuant to section 2.12.1, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the Work together with any increased costs to the City in completing the Work.
- 2.18.3 If the City does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the Work is completed or accepted.

3.0 SALES TAX EXEMPTION AND OTHER TAXES

- 3.0.1 To the extent that materials and supplies are used or incorporated in the performance of this Contract, the Contractor is considered an exempt purchaser under the Massachusetts Sales Act, Chapter 14 of the Acts of 1966.
- 3.0.2 The Contractor shall be responsible for paying all other taxes and tariffs of any sort, related to the Work.

3.1 PROHIBITION AGAINST LIENS

The Contractor is prohibited from placing a lien on the City's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers.

3.2 ORDER OF PRECEDENCE

In the event of a conflict between these General Conditions and the Specifications, the General Conditions shall prevail. In the event of a conflict between the Contract and any applicable state or local law or regulation, the state or local law or regulation shall prevail; provided that such state or local law or regulation does not conflict with, or is less restrictive than applicable federal law, regulation, or Executive Order. In the event of such a conflict, applicable federal law, regulation, and Executive Order shall prevail.

3.3 EXAMINATION AND RETENTION OF CONTRACTOR'S RECORDS

The City of Newton shall, until three (3) years after final payment under this Contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this Contract for the purpose of making audit, examination, excerpts, and/or transcriptions.

END OF SECTION

CITY OF NEWTON

WAGE RATE REQUIREMENTS

1. GENERAL

- A.** This section summarizes the requirements for the payment of wages to laborers and mechanics employed under the Contract.
- B.** Other duties and requirements of law which may not be specified in this section apply and are inherently part of the Contract.

2. WAGE RATES

- A.** The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of Labor and Industries. The schedule of prevailing wage rates will be updated annually for all public construction projects lasting longer than one (1) year. The contractor shall pay the prevailing wage rate set out in the applicable prevailing wage rate schedule. Increases in prevailing wage rates shall not be the basis for a change order.
- B.** Keep posted on the site a legible copy of said schedule. Keep on file the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Administrator, or the Architect.
- C.** Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.
- D.** Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by M.G.L. c 149, Sec. 34B, as amended. Such police officers shall be covered by Workmen's Compensation Insurance and Employers Liability Insurance by the Contractor.
- E.** The Contractor and all subcontractors shall, on a weekly basis throughout the term of the contract, provide to the City of Newton certified payroll affidavits verifying compliance with M.G.L. c.149, Sec. 27, 27A and 27B.
- F.** The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.
- G.** The Contractor shall maintain accurate and complete records, including payroll records, during the Contract term and for three years thereafter. Filings made by the Contractor pursuant to Clauses 47, 48 and 49 of the General Conditions shall be deemed to constitute compliance with State filing requirements under the Massachusetts Prevailing Wage Law.



DEVAL L. PATRICK
Governor
TIMOTHY P. MURRAY
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates
As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Director of Labor
LAURA M. MAHLEN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification	Effective Dates and Total Rates					
Construction						
(2 AXLE) DRIVER - EQUIPMENT	12/01/2008	\$42,260				
(3 AXLE) DRIVER - EQUIPMENT	12/01/2008	\$42,330				
(4 & 5 AXLE) DRIVER - EQUIPMENT	12/01/2008	\$42,450				
ADDSUBMERSIBLE PILOT	08/01/2009	\$102,480	08/01/2010	\$107,460	08/01/2011	\$112,980
AIR TRACK OPERATOR	06/01/2009	\$46,850	12/01/2009	\$47,850	06/01/2010	\$48,850
	12/01/2010	\$50,100	06/01/2011	\$51,100	12/01/2011	\$52,350
ASBESTOS REMOVER - PIPE/MECH. EQUIPT.	06/01/2009	\$39,250	12/01/2009	\$40,250		
ASPHALT RAKER	06/01/2009	\$46,350	12/01/2009	\$47,350	06/01/2010	\$48,350
	12/01/2010	\$49,600	06/01/2011	\$50,600	12/01/2011	\$51,850
ASPHALT/CONCRETE/CRUSHER PLANT-ONSITE	06/01/2009	\$57,410	12/01/2009	\$58,530	06/01/2010	\$59,780
	12/01/2010	\$61,030				
BACKHOE/FRONT-END LOADER	06/01/2009	\$57,410	12/01/2009	\$58,530	06/01/2010	\$59,780
	12/01/2010	\$61,030				
BARCO-TYPE/JUMPING TAMPER	06/01/2009	\$46,350	12/01/2009	\$47,350	06/01/2010	\$48,350
	12/01/2010	\$49,600	06/01/2011	\$50,600	12/01/2011	\$51,850
BLOCK PAVER, RAMMER / CURB SETTER	06/01/2009	\$46,850	12/01/2009	\$47,850	06/01/2010	\$48,850
	12/01/2010	\$50,100	06/01/2011	\$51,100	12/01/2011	\$52,350
BOILER MAKER	10/01/2008	\$54,800				
APPRENTICE: BOILERMAKER - Local 29						
Ratio	Step	1	2	3	4	5
1:5	%	63.00	63.00	70.00	75.00	80.00
						85.00
						90.00
						95.00
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2009	\$67,120	02/01/2010	\$68,010	08/01/2010	\$69,910
	02/01/2011	\$70,900	08/01/2011	\$73,000	02/01/2012	\$73,990
APPRENTICE: BRICK/PLASTER/CEMENT MASON - Local 3 Newton						
Ratio	Step	1	2	3	4	5
1:5	%	50.00	60.00	70.00	80.00	90.00
BULLDOZER/GRADER/SCRAPER	06/01/2009	\$57,090	12/01/2009	\$58,190	06/01/2010	\$59,430
	12/01/2010	\$60,680				
CAISSON & UNDERPINNING BOTTOM MAN	06/01/2009	\$47,250	12/01/2009	\$48,250	06/01/2010	\$49,250
	12/01/2010	\$50,500	06/01/2011	\$51,500	12/01/2011	\$52,750
CAISSON & UNDERPINNING LABORER	06/01/2009	\$46,100	12/01/2009	\$47,100	06/01/2010	\$48,100
	12/01/2010	\$49,350	06/01/2011	\$50,350	12/01/2011	\$51,600
CAISSON & UNDERPINNING TOP MAN	06/01/2009	\$46,100	12/01/2009	\$47,100	06/01/2010	\$48,100
	12/01/2010	\$49,350	06/01/2011	\$50,350	12/01/2011	\$51,600
CARBIDE CORE DRILL OPERATOR	06/01/2009	\$46,350	12/01/2009	\$47,350	06/01/2010	\$48,350
	12/01/2010	\$49,600	06/01/2011	\$50,600	12/01/2011	\$51,850
CARPENTER	03/01/2009	\$52,770				

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 09/10/2009

Wage Request Number: 20090910-022

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DEVAL L. FAIRLICK
Governor
TIMOTHY P. MURRAY
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates
As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Director of Labor
LAURA M. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification

Effective Dates and Total Rates

APPRENTICE: CARPENTER - Zone 2 Eastern MA											
Ratio	Step	1	2	3	4	5	6	7	8		
1:5	%	30.00	40.00	70.00	75.00	80.00	80.00	90.00	90.00		
CEMENT MASONRY/PLASTERING					08/01/2009	\$65.510	02/01/2010	\$66.200	08/01/2010	\$67.670	
					02/01/2011	\$68.440	08/01/2011	\$70.060	02/01/2012	\$70.830	
CHAINSAW OPERATOR					06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350	
					12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850	
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES					06/01/2009	\$57.410	12/01/2009	\$58.530	06/01/2010	\$59.780	
					12/01/2010	\$61.030					
COMPRESSOR OPERATOR					06/01/2009	\$47.070	12/01/2009	\$47.890	06/01/2010	\$48.810	
					12/01/2010	\$49.740					
DELEADER (BRIDGE)					07/01/2009	\$62.260	01/01/2010	\$63.410			
DEMO: ADZEMAN					06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100	
					12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600	
DEMO: BACKHOE/LOADER/HAMMER OPERATOR					06/01/2009	\$47.100	12/01/2009	\$48.100	06/01/2010	\$49.100	
					12/01/2010	\$50.350	06/01/2011	\$51.350	12/01/2011	\$52.600	
DEMO: BURNERS					06/01/2009	\$46.850	12/01/2009	\$47.850	06/01/2010	\$48.850	
					12/01/2010	\$50.100	06/01/2011	\$51.100	12/01/2011	\$52.350	
DEMO: CONCRETE CUTTER/SAWYER					06/01/2009	\$47.100	12/01/2009	\$48.100	06/01/2010	\$49.100	
					12/01/2010	\$50.350	06/01/2011	\$51.350	12/01/2011	\$52.600	
DEMO: JACKHAMMER OPERATOR					06/01/2009	\$46.850	12/01/2009	\$47.850	06/01/2010	\$48.850	
					12/01/2010	\$50.100	06/01/2011	\$51.100	12/01/2011	\$52.350	
DEMO: WRECKING LABORER					06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100	
					12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600	
DIRECTIONAL DRILL MACHINE OPERATOR					06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430	
					12/01/2010	\$60.680					
DIVER					08/01/2009	\$75.600	08/01/2010	\$78.890	08/01/2011	\$82.740	
DIVER TENDER					08/01/2009	\$60.240	08/01/2010	\$62.590	08/01/2011	\$65.340	
DIVER TENDER (EFFLUENT)					08/01/2009	\$79.440	08/01/2010	\$82.960	08/01/2011	\$87.090	
DIVERS/SLURRY (EFFLUENT)					08/01/2009	\$102.480	08/01/2010	\$107.410	08/01/2011	\$113.190	
ELECTRICIAN					09/01/2009	\$64.780	03/01/2010	\$66.020	09/01/2010	\$67.260	
					03/01/2011	\$68.490					
APPRENTICE: ELECTRICIAN - Local103											
Ratio	Step	1	2	3	4	5	6	7	8	9	10
2:3***	%	40.00	40.00	45.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00
App Prior 10/03; 30/05/04/05/06/07/08/09											
ELEVATOR CONSTRUCTOR						01/01/2009	\$63.690	01/01/2010	\$65.190	01/01/2011	\$66.690
						01/01/2012	\$68.190				



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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Director of Labor
LAURA M. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification

Effective Dates and Total Rates

APPRENTICE: ELEVATOR CONSTRUCTOR - Local 4												
Ratio	Step	1	2	3	4	5						
1:1	%	50.00	55.00	65.00	70.00	80.00						
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year												
ELEVATOR CONSTRUCTOR HELPER						01/01/2009	\$49.830	01/01/2010	\$51.330	01/01/2011	\$52.830	
						01/01/2012	\$54.330					
FENCE & GUARD RAIL ERECTOR						06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350	
						12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850	
FIELD ENG. - INST. PERSON (BLDG, SITE, HVY CONST)						05/01/2009	\$54.780	11/01/2009	\$55.890	05/01/2010	\$56.990	
						11/01/2010	\$58.230	05/01/2011	\$59.470			
FIELD ENG. - ROD PERSON (BLDG, SITE, HVY CONST)						05/01/2009	\$40.260	11/01/2009	\$40.910	05/01/2010	\$41.560	
						11/01/2010	\$42.290	05/01/2011	\$43.020			
FIELD ENG.-CHIEF OF PARTY (BLDG, SITE, HVY CONST)						05/01/2009	\$56.140	11/01/2009	\$57.250	05/01/2010	\$58.360	
						11/01/2010	\$59.610	05/01/2011	\$60.860			
FIRE ALARM INSTALLER						09/01/2009	\$64.780	03/01/2010	\$66.020	09/01/2010	\$67.260	
						03/01/2011	\$68.490					
FIRE ALARM REPAIR / MAINTENANCE						09/01/2009	\$52.540	03/01/2010	\$53.470	09/01/2010	\$54.410	
						03/01/2011	\$55.330					
FIREMAN (ASST. ENGINEER)						06/01/2009	\$51.780	12/01/2009	\$52.740	06/01/2010	\$53.810	
						12/01/2010	\$54.890					
FLAGGER & SIGNALER						06/01/2009	\$35.800	12/01/2009	\$35.800	06/01/2010	\$36.800	
						12/01/2010	\$36.800	06/01/2011	\$37.800	12/01/2011	\$37.800	
FLOORCOVERER						03/01/2009	\$58.380					
APPRENTICE: FLOORCOVERER - Local 2148 Zone 1												
Ratio	Step	1	2	3	4	5	6	7	8			
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00			
Steps are 750 hrs.												
FORK LIFT/CHERRY PICKER						06/01/2009	\$57.410	12/01/2009	\$58.530	06/01/2010	\$59.780	
						12/01/2010	\$61.030					
GENERATOR/LIGHTING PLANT/HEATERS						06/01/2009	\$47.070	12/01/2009	\$47.890	06/01/2010	\$48.810	
						12/01/2010	\$49.740					
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)						07/01/2009	\$51.760	01/01/2010	\$52.910			
APPRENTICE: GLAZIER - Local 33 Zone 2												
Ratio	Step	1	2	3	4	5	6	7	8			
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00			
Steps are 750 hrs.												

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

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DEVAL L. PAILEK
Governor
TIMOTHY P. MURRAY
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Division of Labor
LAURA M. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification	Effective Dates and Total Rates							
HOISTING ENGINEER/CRANES/GRADALLS	06/01/2009	\$57,410	12/01/2009	\$58,530	06/01/2010	\$59,780		
	12/01/2010	\$61,030						
APPRENTICE: HOISTING ENG. - Local 4								
Ratio Step	1	2	3	4	5	6	7	8
1:4 %	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00
HVAC (DUCTWORK)	08/01/2009	\$62,260	02/01/2010	\$63,510	08/01/2010	\$64,760		
	02/01/2011	\$66,010	08/01/2011	\$67,260	02/01/2012	\$68,510		
	08/01/2012	\$69,760	02/01/2013	\$71,010				
HVAC (ELECTRICAL CONTROLS)	09/01/2009	\$64,780	03/01/2010	\$66,020	09/01/2010	\$67,260		
	03/01/2011	\$68,490						
HVAC (TESTING AND BALANCING - AIR)	08/01/2009	\$62,260	02/01/2010	\$63,510	08/01/2010	\$64,760		
	02/01/2011	\$66,010	08/01/2011	\$67,260	02/01/2012	\$68,510		
	08/01/2012	\$69,760	02/01/2013	\$71,010				
HVAC (TESTING AND BALANCING - WATER)	09/01/2009	\$67,480	03/01/2010	\$68,730				
HVAC MECHANIC	09/01/2009	\$67,480	03/01/2010	\$68,730				
HYDRAULIC DRILLS	06/01/2009	\$46,850	12/01/2009	\$47,850	06/01/2010	\$48,850		
	12/01/2010	\$50,100	06/01/2011	\$51,100	12/01/2011	\$52,350		
INSULATOR (PIPES & TANKS)	09/01/2009	\$59,260	09/01/2010	\$61,660				
APPRENTICE: ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston								
Ratio Step	1	2	3	4				
1:4 %	50.00	60.00	70.00	80.00				
					Step: one 1 year			
IRONWORKER/WELDER	03/16/2009	\$58,230	09/16/2009	\$59,580	03/16/2010	\$60,980		
APPRENTICE: IRONWORKER - Local 7								
Ratio Step	1	2	3	4	5	6		
%	60.00	70.00	75.00	80.00	85.00	90.00		
Structural: 4; Ornamental: 1:4								
JACKHAMMER & PAVING BREAKER OPERATOR	06/01/2009	\$46,350	12/01/2009	\$47,350	06/01/2010	\$48,350		
	12/01/2010	\$49,600	06/01/2011	\$50,600	12/01/2011	\$51,850		
LABORER	06/01/2009	\$46,100	12/01/2009	\$47,100	06/01/2010	\$48,100		
	12/01/2010	\$49,350	06/01/2011	\$50,350	12/01/2011	\$51,600		
APPRENTICE: LABORER - Zone 1								
Ratio Step	1	2	3	4				
1:5 %	60.00	70.00	80.00	90.00				
LABORER: CARPENTER TENDER	06/01/2009	\$46,100	12/01/2009	\$47,100	06/01/2010	\$48,100		
	12/01/2010	\$49,350	06/01/2011	\$50,350	12/01/2011	\$51,600		

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DEVAL L. PAIRICK
Governor
TIMOTHY P. MURRAY
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates
As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Director of Labor
LAURA M. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification	Effective Dates and Total Rates					
LABORER: CEMENT FINISHER TENDER	06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100
	12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100
	12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600
LABORER: MASON TENDER	06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
	12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850
LABORER: MULTI-TRADE TENDER	06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100
	12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600
LABORER: TREE REMOVER	06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100
	12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines.						
LASER BEAM OPERATOR	06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
	12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850
MARBLE & TILE FINISHERS	08/01/2009	\$56.240	02/01/2010	\$56.950	08/01/2010	\$58.470
	02/01/2011	\$59.270	08/01/2011	\$60.950	02/01/2012	\$61.740
APPRENTICE: MARBLE-TILE-TERRAZZO FINISHER - Local 3 Marble & Tile						
Ratio	Step	1	2	3	4	5
1:3	%	50.00	60.00	70.00	80.00	90.00
Step rate min \$90.00 hr.						
MARBLE MASONS, TILELAYERS & TERRAZZO MECH	08/01/2009	\$67.160	02/01/2010	\$68.050	08/01/2010	\$69.930
	02/01/2011	\$70.940	08/01/2011	\$73.040	02/01/2012	\$74.030
APPRENTICE: MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile						
Ratio	Step	1	2	3	4	5
1:3	%	50.00	60.00	70.00	80.00	90.00
MECH. SWEEPER OPERATOR (NON CONSTRUCTION)	07/01/2009	\$28.300	07/01/2010	\$29.000	07/01/2011	\$29.700
MECH. SWEEPER OPERATOR (ON CONST. SITES)	06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430
	12/01/2010	\$60.680				
MECHANICS MAINTENANCE	06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430
	12/01/2010	\$60.680				
MILLWRIGHT (Zone 1)	03/01/2009	\$54.400				
APPRENTICE: MILLWRIGHT - Local 1121 Zone 1						
Ratio	Step	1	2	3	4	5
1:5	%	50.00	55.00	60.00	65.00	70.00
MORTAR MIXER	06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
	12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850
OILER (OTHER THAN TRUCK CRANES, GRADALLS)	06/01/2009	\$41.090	12/01/2009	\$41.750	06/01/2010	\$42.480
	12/01/2010	\$43.220				

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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification	Effective Dates and Total Rates					
OILER (TRUCK CRANES, GRADALLS)	06/01/2009	\$43,990	12/01/2009	\$44,720	06/01/2010	\$45,530
	12/01/2010	\$46,380				
OTHER POWER DRIVEN EQUIPMENT - CLASS II	06/01/2009	\$57,090	12/01/2009	\$58,190	06/01/2010	\$59,430
	12/01/2010	\$60,680				
PAINTER (BRIDGES/TANKS)	07/01/2009	\$62,260	01/01/2010	\$63,410		
APPRENTICE: PAINTER - Local 35 Zone 2						
Ratio	Step	1	2	3	4	5
1:1	%	30.00	33.00	40.00	43.00	70.00
						75.00
						80.00
						90.00
						Step rate 750 hrs.
PAINTER (SPRAY OR SANDBLAST, NEW) *	07/01/2009	\$53,160	01/01/2010	\$54,310		
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.						
APPRENTICE: PAINTER - Local 35 Zone 2						
Ratio	Step	1	2	3	4	5
1:1	%	30.00	33.00	40.00	43.00	70.00
						75.00
						80.00
						90.00
						Step rate 750 hrs.
PAINTER (SPRAY OR SANDBLAST, REPAINT)	07/01/2009	\$51,220	01/01/2010	\$52,370		
APPRENTICE: PAINTER - Local 35 Zone 2						
Ratio	Step	1	2	3	4	5
1:1	%	30.00	33.00	40.00	43.00	70.00
						75.00
						80.00
						90.00
						Step rate 750 hrs.
PAINTER (TRAFFIC MARKINGS)	06/01/2009	\$46,100	12/01/2009	\$47,100	06/01/2010	\$48,100
	12/01/2010	\$49,350	06/01/2011	\$50,350	12/01/2011	\$51,600
PAINTER / TAPER (BRUSH, NEW) *	07/01/2009	\$51,760	01/01/2010	\$52,910		
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.						
APPRENTICE: PAINTER - Local 35 Zone 2						
Ratio	Step	1	2	3	4	5
1:1	%	30.00	33.00	40.00	43.00	70.00
						75.00
						80.00
						90.00
						Step rate 750 hrs.
PAINTER / TAPER (BRUSH, REPAINT)	07/01/2009	\$49,820	01/01/2010	\$50,970		
APPRENTICE: PAINTER - Local 35 Zone 2						
Ratio	Step	1	2	3	4	5
1:1	%	30.00	33.00	40.00	43.00	70.00
						75.00
						80.00
						90.00
						Step rate 750 hrs.

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DEVAL L. PAILEK
Governor
TIMOTHY P. MURRAY
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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Division of Labor
LAURA M. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification	Effective Dates and Total Rates					
PANEL & PICKUP TRUCKS DRIVER	12/01/2008	\$42.090				
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2009	\$60.240	08/01/2010	\$62.590	08/01/2011	\$65.340
PILE DRIVER	08/01/2009	\$60.240	08/01/2010	\$62.590	08/01/2011	\$65.340
APPRENTICE: PILE DRIVER - Local 54 Zone 1						
Ratio	Step	1	2	3	4	5
1:3	%	40.00	45.00	70.00	75.00	80.00
85.00	90.00	95.00				
PIPEFITTER & STEAMFITTER	09/01/2009	\$67.480	08/01/2010	\$68.730		
APPRENTICE: PIPEFITTER - Local 537						
Ratio	Step	1	2	3	4	5
**	%	40.00	45.00	60.00	70.00	80.00
**1:3; 3:1.5; 1:10 then another \$ step on 1 yr; Refrig/AC Mechanic \$ step & Hrs Same as above						
Refrig/AC Mechanic **1:1; 1:2; 2:4; 3:4; 4:8; 5:10; 6:12; 7:14; 8:17; 9:20; 10:23(Max)						
PIPELAYER	06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
	12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850
PLUMBERS & GASFITTERS	09/01/2009	\$66.250	08/01/2010	\$67.500		
APPRENTICE: PLUMBER - Local 12						
Ratio	Step	1	2	3	4	5
**	%	35.00	40.00	55.00	65.00	75.00
**1:2; 2:4; 3:10; 4:14; 5:19 \$ step on 1 year; \$ step 4 w/ license = 70; \$ step 5 w/ license = 80						
PNEUMATIC CONTROLS (TEMP.)	09/01/2009	\$67.480	08/01/2010	\$68.730		
PNEUMATIC DRILL/TOOL OPERATOR	06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
	12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850
POWDERMAN & BLASTER	06/01/2009	\$47.100	12/01/2009	\$48.100	06/01/2010	\$49.100
	12/01/2010	\$50.350	06/01/2011	\$51.350	12/01/2011	\$52.600
POWER SHOVEL/DERRICK/TRENCHING MACHINE	06/01/2009	\$57.410	12/01/2009	\$58.530	06/01/2010	\$59.780
	12/01/2010	\$61.030				
PUMP OPERATOR (CONCRETE)	06/01/2009	\$57.410	12/01/2009	\$58.530	06/01/2010	\$59.780
	12/01/2010	\$61.030				
PUMP OPERATOR (DEWATERING, OTHER)	06/01/2009	\$47.070	12/01/2009	\$47.890	06/01/2010	\$48.810
	12/01/2010	\$49.740				
READY-MIX CONCRETE DRIVER	05/01/2009	\$40.520	05/01/2010	\$41.080	05/01/2011	\$41.690
RECLAIMERS	06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430
	12/01/2010	\$60.680				
RESIDENTIAL WOOD FRAME CARPENTER **	04/01/2009	\$35.620				
** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement.						
RIDE-ON MOTORIZED BUGGY OPERATOR	06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
	12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850

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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Division of Labor
LAURA M. MARLIN
Commissioner of Division of Occupational Safety

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification	Effective Dates and Total Rates									
ROLLER/SPREADER/MULCHING MACHINE	06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430				
	12/01/2010	\$60.680								
ROOFER (Inc. Roofer Waterproofing & Roofer Dampproofg)	02/01/2009	\$53.860								
APPRENTICE: ROOFER - Local33										
Ratio	Step	1	2	3	4	5				
**	%	50.00	60.00	65.00	75.00	85.00				
**1-5, 2-4-10 thereafter 110 (or portion thereof)						Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.				
Roofing (Ramp proofg): Same Steps and Hours as Above **1-4; Thereafter 11										
SHEETMETAL WORKER	08/01/2009	\$62.260	02/01/2010	\$63.510	08/01/2010	\$64.760				
	02/01/2011	\$66.010	08/01/2011	\$67.260	02/01/2012	\$68.510				
	08/01/2012	\$69.760	02/01/2013	\$71.010						
APPRENTICE: SHEET METAL WORKER - Local17-A										
Ratio	Step	1	2	3	4	5	6	7		
1-4	%	40.00	45.00	50.00	60.00	65.00	75.00	85.00		
Steps 1-3 are 1 year; Steps 4-7 are 6 mos.										
SIGNERECTOR	06/01/2009	\$37.780								
APPRENTICE: SIGNERECTOR - Local33 Zone 2										
Ratio	Step	1	2	3	4	5	6	7	8	9
1-1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00
Steps are 4 mos.										
SLATE / TILE / PRECAST CONCRETE ROOFER	02/01/2009	\$54.110								
SPECIALIZED EARTH MOVING EQUIP < 35 TONS	12/01/2008	\$42.550								
SPECIALIZED EARTH MOVING EQUIP > 35 TONS	12/01/2008	\$42.840								
SPRINKLER FITTER	03/16/2009	\$66.950	09/16/2009	\$68.450	03/16/2010	\$69.700				
APPRENTICE: SPRINKLER FITTER - Local330										
Ratio	Step	1	2	3	4	5	6	7	8	9
1-1	%	40.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00	80.00
STEAM BOILER OPERATOR	06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430				
	12/01/2010	\$60.680								
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430				
	12/01/2010	\$60.680								
TELECOMMUNICATION TECHNICIAN	09/01/2009	\$52.540	03/01/2010	\$53.470	09/01/2010	\$54.410				
	03/01/2011	\$55.330								
APPRENTICE: TELECOMMUNICATION TECHNICIAN - Local103										
Ratio	Step	1	2	3	4	5	6	7	8	
1-1	%	40.00	45.00	50.00	55.00	60.00	65.00	75.00	80.00	

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 09/10/2009

Wage Request Number: 20090910-022

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DEVAL L. PAIRICK
Governor
TIMOTHY F. MURRAY
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Director of Labor
LAUREA M. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification		Effective Dates and Total Rates					
TERRAZZO FINISHERS		08/01/2009	\$66.060	02/01/2010	\$66.950	08/01/2010	\$68.850
		02/01/2011	\$69.840	08/01/2011	\$71.940	02/01/2012	\$72.930
APPRENTICE: MARBLE-TILE-TERRAZZO FINISHER - Local 3 Marble & Tile							
Ratio	Step	1	2	3	4	5	
1:3	%	50.00	40.00	70.00	80.00	90.00	
Steps are 800 hrs.							
TEST BORING DRILLER		06/01/2009	\$47.500	12/01/2009	\$48.500	06/01/2010	\$49.500
		12/01/2010	\$50.750	06/01/2011	\$51.750	12/01/2011	\$53.000
TEST BORING DRILLER HELPER		06/01/2009	\$46.220	12/01/2009	\$47.220	06/01/2010	\$48.220
		12/01/2010	\$49.470	06/01/2011	\$50.470	12/01/2011	\$51.720
TEST BORING LABORER		06/01/2009	\$46.100	12/01/2009	\$47.100	06/01/2010	\$48.100
		12/01/2010	\$49.350	06/01/2011	\$50.350	12/01/2011	\$51.600
TRACTORS/PORTABLE STEAM GENERATORS		06/01/2009	\$57.090	12/01/2009	\$58.190	06/01/2010	\$59.430
		12/01/2010	\$60.680				
TRAILERS FOR EARTH MOVING EQUIPMENT		12/01/2008	\$43.130				
TUNNEL WORK - COMPRESSED AIR		06/01/2009	\$58.430	12/01/2009	\$59.680	06/01/2010	\$60.930
		12/01/2010	\$62.180	06/01/2011	\$63.430	12/01/2011	\$64.680
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)		06/01/2009	\$60.430	12/01/2009	\$61.680	06/01/2010	\$62.930
		12/01/2010	\$64.180	06/01/2011	\$65.430	12/01/2011	\$66.680
TUNNEL WORK - FREE AIR		06/01/2009	\$50.500	12/01/2009	\$51.750	06/01/2010	\$53.000
		12/01/2010	\$54.250	06/01/2011	\$55.500	12/01/2011	\$56.750
TUNNEL WORK - FREE AIR (HAZ. WASTE)		06/01/2009	\$52.500	12/01/2009	\$53.750	06/01/2010	\$55.000
		12/01/2010	\$56.250	06/01/2011	\$57.500	12/01/2011	\$58.750
VAC-HAUL		12/01/2008	\$42.550				
WAGON DRILL OPERATOR		06/01/2009	\$46.350	12/01/2009	\$47.350	06/01/2010	\$48.350
		12/01/2010	\$49.600	06/01/2011	\$50.600	12/01/2011	\$51.850
WASTE WATER PUMP OPERATOR		06/01/2009	\$57.410	12/01/2009	\$58.530	06/01/2010	\$59.780
		12/01/2010	\$61.030				
WATER METER INSTALLER		09/01/2009	\$66.250	03/01/2010	\$67.500		

This wage schedule must be posted at the worksite in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 09/10/2009

Wage Request Number: 20090910-022

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DEVAL L. PAINTER
Governor
TIMOTHY F. MURRAY
Lieutenant Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H



SUZANNE M. BUMP
Secretary of Labor and Workforce Development
GEORGE NOEL
Director of Labor
LAURA H. MARLIN
Commissioner of Division of Occupational Safety

Awarding Authority: City of Newton

Contract Number: 10-14

City/Town: NEWTON

Description of Work: Pump Replacement at Longfellow Road Pump Station

Job Location: Longfellow Road

Classification

Effective Dates and Total Rates

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours) unless otherwise specified.

- * Ratios are expressed in allowable number of apprentices to journeyman or fraction thereof.
- ** Multiple ratios are listed in the comment field.
- *** The job site ratio of 2 apprentices (APP) for every 3 journeyman (JM) is allowed as follows:
1 JM: 1 APP; 2-3 JM: 2 APP; 4-6 JM: 4 APP; 7-9 JM: 6 APP; 10-12 JM: 8 APP; 13-15 JM: 10 APP; etc.
- **** The job site ratio of 2 apprentices (APP) for every 3 journeyman (JM) is allowed as follows:

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street, Boston, MA 02108; Tel: 617-727-3465.

Issue Date: 09/10/2009

Wage Request Number: 20090910-022

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The Massachusetts Prevailing Wage Law

M.G.L. ch. 149, §§ 26 – 27

NOTICE TO AWARDING AUTHORITIES

- 'The enclosed wage schedule applies only to the specific project listed at the top and will be updated for any public construction project lasting longer than one (1) year.
- 'You should request an updated wage schedule from the Division of Occupational Safety if you have not opened bids or selected a contractor within 90 days of the date of issuance of the enclosed wage schedule.
- 'The wage schedule shall be incorporated in any advertisement or call for bids for the project for which it has been issued.
- 'Once a contractor has been selected by the awarding authority, the wage schedule shall be made a part of the contract for that project.

NOTICE TO CONTRACTORS

- The enclosed wage schedule, and any updated schedule, must be posted in a conspicuous place at the work site during the life of the project.
- The wages listed on the enclosed wage schedule must be paid to employees on public works projects regardless of whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- The enclosed wage schedule applies to all phases of the project including the final clean-up. Contractors whose only role is to perform final clean-up must pay their employees according to this wage schedule.
- All apprentices must be registered with the Massachusetts Division of Apprentice Training in order to be paid at the reduced apprentice rates. If a worker is not registered with the Division of Apprentice Training, they must be paid the “total rate” listed on the wage schedule regardless of experience or skill level. For further information, please call (617) 727-3486 or write to the Division of Apprentice Training, 399 Washington Street, 4th Floor, Boston, MA 02108

WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. This is required to be done on a weekly basis. Once collected, the awarding authority is also required to preserve those records for three years.

In addition, each such contractor, subcontractor or public body shall furnish to the Department of Labor & Workforce Development/Division of Occupational Safety within fifteen days after completion of its portion of the work a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

_____, 200_____

I, _____,
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____ on the _____
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____

DIVISION OF OCCUPATIONAL SAFETY, 399 WASHINGTON STREET, 5TH FL., BOSTON, MA. 02108

**PUMP REPLACEMENT
LONGFELLOW ROAD PUMP STATION**

SPECIAL CONDITIONS

1.0 PROJECT SITE

- A. The area of work shall be the Longfellow Road Pump Station-Longfellow Road, Newton, MA.

2.0 TIME FOR COMPLETION

- A. The work shall be commenced at the time stipulated in the Notice to Proceed to the Contractor. All work with shall be fully complete within 12 months from the date of contract execution.

3.0 PAYMENT

- A. Payment to the Contractor shall be made in accordance with the provisions of Paragraph 2.6 of the Genaral Conditions. The amount of retainage established for this contract shall be 5%.

4.0 LIQUIDATED DAMAGES

- A. As actual damages for any delay in completion are impossible to determine, the Contractor and his/her sureties shall be liable for and shall pay fifty dollars (\$50.00) as fixed, and agreed liquidated damages for each calendar day of delay beyond the completion date stated in the Notice to Proceed until the work is brought to full and accepted completion.

5.0 COMMUNICATIONS

- A. All notices, demands, requests, instructions, approvals and claims must be in writing.
- B. Any such notice shall be deemed to have been given as of the time of delivery, or of actual receipt in the case of telegrams or, in the case of mailing, when it should have been received in due course of post.
- C. For communicating purposes, the office address of the Contractor shall be that stated on the signature page of the contract; that of the City shall be as stated in the Notice to Contractors. Any subsequent change in address of either party shall be communicated to the other in writing.

6.0 PLANS AND SPECIFICATIONS

- A. The City will furnish to the Contractor, without charge, all copies of the specifications reasonably necessary in the performance of the contract work.

7.0 COORDINATION

The Contractor shall:

- A. Supply to the City the name and telephone number of a responsible person who may be contacted during off-hour emergencies on the project.
- B. Cooperate at all times with the City and the Project Manager, and ensure the cooperation of his key personnel and that of his subcontractors.
- C. Provide 24 hour minimum notice to building management to prepare for access to any site area.

8.0 CONDUCT OF THE WORK

- A. The work must be completed in a continuous uninterrupted operation. The Contractor must use sufficient men and adequate equipment to complete all the necessary work requirements within a minimum period of time.

- B. The work shall be conducted between the hours of 8:00 a.m. and 4:30 p.m. on Monday through Friday. No work shall be done on holidays, Saturdays or Sundays other than for emergencies, or unless specifically authorized by the City.
- C. The Contractor is responsible for the security of partially completed work until the project is finally accepted by the City.

9.0 ALTERATION

- A. The Contractor shall patch, repair and/or replace all existing materials and surfaces remaining exposed after installation of new work which have been affected by alteration or removal of existing work. All patch and repair work shall match existing.

10.0 GENERAL DIRECTIONS

- A. Damage to Persons and Property

Any damage to buildings, roads, public roads, bituminous concrete areas, fences, lawn areas, trees, shrubbery, electric or telephone poles, underground utilities, etc., shall be repaired by the Contractor at his own expense. Damaged property shall be returned to its original condition prior to the damages within a reasonable time period, except all utility outages shall be repaired immediately.

- B. Protection of Persons and Property

The Contractor shall, at all times, leave an unobstructed way along the roadways and walks, and shall maintain barriers and lights for the protection of all persons and property in all locations where he has materials stored or work going on, and during the entire time such work is going on or material is stored.

- C. The Contractor shall at the end of each work day leave the fields in usable condition. There shall be no open holes/trenches or exposed irrigation heads that could pose a trip hazard or potential injury to persons using the fields.

- D. Care of Work

All work is to be carefully protected so that no injury will come to it from water, frost, accident, or any other cause and any injury which may come to any of the work shall be repaired immediately by the Contractor at his own expense and without additional cost to the City. This shall also apply to any abutting or adjoining work on premises. The Contractor shall be responsible for any damage and in the event of such damage, the Contractor shall repair the damage immediately at his own cost and without additional cost to the City.

- E. Removal of Debris

Debris of any nature shall be completely removed from the site at the end of each days work and disposed of in accordance with all Federal, State and local regulations.

- F. The Contractor is responsible for the security of all work until it is accepted by the City.

11.0 DELETED

12.0 SUBMISSION OF PAYROLLS

- A. The Contractor shall, with each monthly invoice submitted during the term of this Contract, submit to the City two (2) legible copies of his payrolls documenting the wages paid to all employees performing on site labor relating to the work of this Contract. These copies shall be prepared on forms supplied by the City.

13.0 DRAWINGS

- A. The drawings attached herein and such drawings as may be issued per addendum, shall constitute an integral part of this section and shall serve as the working drawings.

- B. Drawings shall not be scaled. Field verification is directed since actual locations, dimensions and levels are existing.
- C. All items not specifically mentioned in the specifications or noted on the drawings, but which are obviously necessary to make a complete working installation, shall be included.

14.0 MATERIALS

- A. Unless specifically so stated to the contrary the use of a manufacturer's name or style number is not restrictive, and is intended solely as an identification of the type and quality of the materials and services required. In all cases, the words "or approved equal" if not inserted are implied.
- B. An item equal to that named or described in the specifications may upon written approval of the City be furnished by the Contractor. An item shall be considered equal to the item so named or described if (1) it is at least equal in quality, durability, appearance, strength and design; (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased; (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.
- C. The name and identification of all materials other than the one specifically named shall be submitted to the City in writing for approval, prior to purchase, use or fabrication of such items. Subject to the provisions of M.G.L. Ch. 30, Sec. 39J, approval shall be at the sole discretion of the City, shall be in writing to be effective, and the decision of the City shall be final. The City may require tests of all materials so submitted to establish quality standards at the Contractor's expense.
- D. For the use of material other than the one specified, the Contractor shall assume the cost of and responsibility for satisfactorily accomplishing all changes in the work as shown. All directions, specifications and recommendations by manufacturers for the installation, handling, storing, adjustment, and operation of their equipment shall be complied with and responsibility for proper performance shall continue to rest with the Contractor.
- E. Except as otherwise provided for by the provisions of M.G.L. Ch. 30, Sec. 39J, the Contractor shall not have any right of appeal from the decision of the City condemning any materials furnished if the Contractor fails to obtain the approval for substitution in accordance with these provisions. If any substitutu is more costly, the Contracotr shall pay for such costs

15.0 WARRANTY AND INDEMNIFICATION

- A. In addition to other guarantees or warranties required under law or other sections of the specification, the Contractor warrants all materials furnished and labor performed under this Contract to be free from defects or errors in workmanship or installation for a period of one year from the date of Completion of the work, as certified by the Project Manager. The Contractor shall indemnify the Authority for the full cost of any damage to the property that may result by reason of such defects or errors and shall indemnify the Authority from and against any and all claims, demands, losses, costs, expenses, liabilities and damages, including reasonable attorney's fees and expenses, arising out of or on account of this Contract, including but not limited to claims brought against the Authority for alleged infringement of patents based upon any methods of construction or application of upon materials furnished under the Contract.

END OF SECTION

**CITY OF NEWTON
DEPARTMENT OF PUBLIC WORKS**

SPECIFIC REQUIREMENTS OF THE CONTRACT

LONGFELLOW ROAD PUMP STATION PUMP REPLACEMENT

SECTION 01270

MEASUREMENT AND PAYMENT

1. GENERAL

- A. The following sections describe the measurement and payment for the work to be done under the respective items listed in the FORM OF GENERAL BID.
- B. The lump sum price stated in the FORM OF GENERAL BID shall constitute full compensation as herein specified, for all of the work completed in accordance with the specifications. All other activities required in connection with performance of the work, including all work required under Division 1, GENERAL REQUIREMENTS, whether described in the contract documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the form of general bid, but will be considered to be incidental to performance of the overall project.

2. ITEM 1

The lump sum price for Item 1 shall constitute full compensation for furnishing all labor, materials, tools and equipment for constructing the project, complete, as called for in the specifications.

END OF SECTION 01270

SECTION 03302

FIELD CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers concrete and all related items necessary to place and finish the concrete work.
- B. Concrete thrust, and anchor blocks, to be provided at all water main bends, tees, plugs and wyes and at other locations required by the Engineer shall be installed in accordance with the details shown on the drawings and as specified in this section.
- C. Concrete encasement for piping with shallow cover and for encasement of telephone, and electrical duct bank when specified shall be installed in accordance with the details shown on the drawings and as specified in this section.

1.02 RELATED WORK:

- A. Section 11310 – PUMPING EQUIPMENT

1.03 REFERENCES:

- A. The following standards form a part of this specification:

American Concrete Institute (ACI)

ACI 304 Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.

ACI 305 Recommended Practice for Hot Weather Concreting

ACI 306 Recommended Practice for Cold Weather Concreting

ACI SP-66 ACI Detailing Manual

ACI 318 Building Code Requirements for Reinforced Concrete

American Society for Testing and Materials (ASTM)

ASTM A615 Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

ASTM C33 Concrete Aggregates

ASTM C94 Ready-Mixed Concrete

ASTM C143 Test for Slump of Portland Cement Concrete

ASTM C150 Portland Cement

ASTM C260 Air Entraining Admixtures for Concrete

ASTM C494 Chemical Admixtures for Concrete

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

Six copies of the statement of materials constituting the design of mixes for each size aggregate as required by ASTM C94 shall be submitted to the Engineer within one week following award of the Contract.

PART 2 - PRODUCTS

2.01 CONCRETE:

- A. All concrete, reinforced or non-reinforced shall have a 28 day compressive strength of 3000 psi unless otherwise noted on the design drawings. A minimum of 5.5 sacks of cement per cubic yard and a maximum water cement ratio of 6.9 gallons per sack shall be used.
- B. Concrete shall conform to ASTM C94. The Contractor shall be responsible for the design of the concrete mixtures. Slump shall be a maximum of 4-inches and a minimum of 2-inches, determined in accordance with ASTM C143.
- C. Admixtures shall be as specified in subsection 2.05. No additional admixtures shall be used unless approved by the Engineer.
- D. No additional water, except for the amount indicated by the design mix shall be added to the concrete without the prior permission of the Engineer.

2.02 REINFORCING:

Reinforcing as shown as directed by the Engineer, shall conform to ACI 318 and ASTM A615 and shall be detailed in accordance with ACI SP-66. All Steel reinforcing bars shall be grade 60.

2.03 CEMENT:

The cement shall be an approved brand of American manufactured Portland Cement, Type II conforming to the applicable requirements of ASTM C150.

2.04 AGGREGATES

- A. Except as otherwise noted, aggregate shall conform to the requirements of ASTM C33.
- B. Maximum size aggregate shall be 3/4-inch.

2.05 ADMIXTURES:

- A. All concrete (unless otherwise directed) shall contain an air entraining agent. Air entrained concrete shall have air content by volume of 4 to 8 percent for 3/4-inch aggregate.
- B. Air entraining agent shall be in accordance with ASTM C260 and shall be Darex AEA, as manufactured by W.R. Grace & Company; Placewel (air entraining Type), as manufactured by Johns Manville; Sika AER as manufactured by Sika Chemical Company; or an approved equal product.
- C. Water reducing agent shall be WRDA, as manufactured by W.R. Grace & Company; Placewel (non-air entraining Type), as manufactured by Johns Manville; Sika Plastiment as manufactured by Sika Chemical Company; or an approved equal product.
- D. Water reducing agent-retarder shall be "Daratard," as manufactured by W.R. Grace & Company; Sika Plastiment as manufactured by Sika Chemical Company; or an approved equal product.

2.06 WATER:

- A. Water for concrete shall be potable, free of deleterious amounts of oil, acid, alkali, organic matter and other deleterious substances.

2.07 CONCRETE FORMS:

- A. Forms for exterior and interior surfaces which will be exposed to view after the work is completed, whether such surfaces are painted or unpainted, shall be new plywood stock, steel, tempered masonite, or other materials which will provide smooth concrete surfaces without subsequent surface plastering. Plastic or plastic-faced forms shall not be used, except with the prior approval of the Engineer.
- B. Form ties shall be cone type or equal, with waterstop, which leaves no metal closer than 2-inches to finished face of concrete.
- C. Form release agent shall be a non-staining, non-yellowing, non-toxic liquid free from kerosene and resins of the type recommended by the manufacturer of the forming system being used such as EZ strip by L&M Construction Chemicals, Omaha, NB and "Magic Kote" by Symons Corp., Des Plaines, IL or approved equal.
- D. Where steel adjacent to vertical faces of forms cannot be otherwise secured, mortar doughnuts shall be used to prevent steel from lying too close to the finish vertical faces of the concrete

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Before placing concrete, forms and the space to be occupied by the concrete shall be thoroughly cleaned, and reinforcing steel and embedded metal shall be free from dirt, oil, mill scale, loose rust, paint or the material which would tend to reduce the bond.
- B. Earth, concrete, masonry, or other water permeable material against which concrete is to be placed shall be thoroughly saturated with water immediately before concrete is placed.
- C. No concrete shall be placed until the consolidation of the ground and the arrangement and details of forms and reinforcing have been inspected and approved by the Engineer.

3.02 THRUST AND ANCHOR BLOCKS:

- A. Minimum bearing areas for thrust blocks and dimensions of anchor blocks shall be as shown on the drawings.
- B. Concrete for thrust and anchor blocks shall be placed against undisturbed earth, and wooden side forms shall be used to provide satisfactory lines and dimensions. Felt roofing paper shall be placed to protect joints. No concrete shall be placed so as to cover joints, bolts or nuts, or to interfere with the removal of the joints.

3.03 FILL CONCRETE:

- A. Fill concrete shall be placed in those locations as indicated on the design drawings. Fill concrete shall consist of materials as previously specified, with a minimum 28-day compressive strength of 3000 psi.
- B. Before fill concrete is placed, the following procedures shall be used to prepare surfaces; all dirt, scum and laitance shall be removed by chipping and washing. The clean, roughened base surface shall be saturated with water, but shall have no free water on the surface. A coat of 1:2 cement-sand grout, approximately 1/8-inch thick, shall be well scrubbed into the thoroughly dampened concrete base. The concrete fill shall be placed immediately, before grout has dried or set.
- C. Fill concrete shall be brought to lines and grades as shown on the design drawings.

3.04 CONCRETE PLACING DURING COLD WEATHER:

- A. Concrete shall not be placed on frozen ground, and no frozen material or material containing ice shall be used. Materials for concrete shall be heated when temperature is below 40°F, or is expected to fall to below 40°F, within 73 hours, and the concrete after placing shall be protected by covering, heat, or both.
- B. All details of Contractor's handling and protecting of concrete during freezing weather shall be subject to the approval and direction of the Engineer. All procedures shall be in accordance with provisions of ACI 306.

3.05 CONCRETE PLACING DURING HOT WEATHER:

- A. Concrete just placed shall be protected from the direct rays of the sun and the forms and reinforcement just prior to placing, shall be sprinkled with cold water. The Contractor shall make every effort to minimize delays, which will result in excessive mixing of the concrete after arrival on the job.
- B. During periods of excessively hot weather (90°F or above), ingredients in the concrete shall be cooled insofar as possible and cold mixing water shall be used to maintain the temperature of the concrete at permissible levels all in accordance with the provisions of ACI 305. Any concrete with a temperature above 90°F, when ready for placement, will not be acceptable, and will be rejected.

3.06 FIELD QUALITY CONTROL:

- A. Concrete inspection and testing shall be performed by the Engineer or by an inspection laboratory, designated by the Engineer, engaged and paid for by the Owner. Testing equipment shall be supplied by the laboratory, and the preparation of samples and all testing shall be performed by the laboratory personnel. Full assistance and cooperation, concrete for samples, and such auxiliary personnel and equipment as needed shall be provided by the Contractor.
- B. At least 4 standard compression test cylinders shall be made and tested and 1 slump test from each day's placement of concrete. A minimum of four compression test cylinders shall be made and tested for each 100 cubic yards of each type and design strength of concrete placed. One cylinder shall be tested at 7 days, and two at 28 days. The fourth cylinder from each set shall be kept until the 28 day test report on the second and third cylinders in the same set has been received. If the average compressive strength of the two 28 day cylinders do not achieve the required level, the Engineer may elect to test the fourth cylinder immediately or test it after 56 days. If job experience indicates additional cylinder tests or other tests are required for proper control or determination of concrete quality, such tests shall be made.
- C. The Engineer shall have the right to reject concrete represented by low strength tests. Rejected concrete shall be promptly removed and replaced with concrete conforming to the specification. The decision of the Engineer as to whether substandard concrete is to be accepted or rejected shall be final.

END OF SECTION

SECTION 11310

WASTEWATER PUMPING EQUIPMENT

1.01 WORK INCLUDED:

- A. This section covers the furnishing, installation and testing of the wastewater pump and motor, drive and appurtenances for the Longfellow Road Pump Station pump no. 1 as herein specified.

1.02 SYSTEM DESCRIPTION:

- A. The wastewater pumping equipment shall consist of a new pump and motor to replace the existing pump and motor for the pump station listed above with parameters as specified in the pump and motor schedule (2.02), including frame, seal, coupling, and electrical system interface, and all associated equipment and accessories required to make a complete system.
- B. This specification directs special attention to certain features, but does not purport to cover all details of the design, manufacture or installation of the pumping unit. Final responsibility for supplying and installing pumping equipment which functions as specified herein rests with the Contractor and his suppliers.
- C. The Contractor shall be required to make the necessary piping modifications on the suction and discharge sides of each pump and on the existing concrete pads to allow proper installation of the new pump.

1.03 QUALITY ASSURANCE:

A. ALL EQUIPMENT SHALL CONFORM TO THE FOLLOWING CRITERIA:

1. Equipment shall be manufacturer's standard products presently in commercial production.
2. Conform to Hydraulic Institute Standards.
3. All equipment specified under this Section shall be furnished by a single supplier and shall be products of manufacturers regularly engaged in the production of said equipment. The supplier shall have the sole responsibility for proper functioning of the complete pumping unit.
4. Any reference to a specific manufacturer or model number is for the purpose of establishing a quality or parameter for specification writing and is not to be considered proprietary. In all cases any source or device that has the quality and operating capabilities specified may be acceptable.
5. Conform to requirements for materials, installation and equipment approvals of state, local, Underwriter's Laboratories, Inc., or other applicable codes, whether or not called for on the drawings or in the specifications.
6. Workmanship shall be first class in all respects.
7. Base the use of unspecified materials on their continuous and successful employment under similar conditions, as called for in this section.

B. MANUFACTURER'S QUALIFICATIONS:

1. On request from the Owner, the pump manufacturer shall demonstrate proof of financial responsibility with respect to performance and delivery date.
2. On request from the Owner, the pump manufacturer shall provide proof or evidence of facilities, equipment and skills required to produce the equipment specified herein.
3. The manufacturer shall provide the supervisory service of a factory trained Owner, who is specifically trained on the type of equipment supplied, for a period of not less than one 8-hour day to assist in installation of the pumping equipment and related appurtenances, to provide initial startup of each pump and to instruct the Owner's operating personnel in the operation and maintenance of the equipment provided. The specified time period is a minimum

time requirement. The actual time required to complete the specified tasks may take longer, but shall be completed at no additional cost to the Owner.

C. FACTORY TESTS:

1. General:

Six (6) copies of certified Shop Test results for the pump, stamped and approved by a Registered Professional Owner, in the appropriate field, shall be provided to the Owner.

2. Pump Testing Requirements:

- a. The pump manufacturer shall not ship any pump until after the certified pump performance tests have been submitted to and reviewed by the Owner.
- b. Hydrostatic testing of the pump casing, suction cover and stuffing box cover shall be performed after assembly of the pump. The minimum test pressure shall be the greater of: one point five (1.50) times the shutoff head at maximum speed with full diameter impeller, or one hundred twenty-five (125) psi, whichever is greater. Certified hydrostatic test results shall be submitted to the Owner prior to pump performance testing.
- c. The pump to be furnished under this Section shall be performance tested on water at the pump manufacturer's plant, before shipment. The purpose of performance testing shall be to prove that the pump to be supplied conforms to the Specification requirements, and that the pump can properly operate throughout the entire pump envelope. Tests shall conform to the Standards of the Hydraulic Institute, except as specifically modified herein.
 1. Head
 2. Capacity
 3. Brake horsepower
 4. Efficiency
 5. Vibration
- d. After the completion of the pump performance testing, the pump shall be operated at maximum speed against a closed discharge valve for a minimum of two (2) minutes. After this test is completed, the Owner reserves the right to require that the pump suction cover be removed and an inspection made of the suction cover wear ring and the impeller wear ring. If any contact has occurred between the rings during the shutoff test operation, all pump shall be rejected.
- e. If, in the sole opinion of the Owner, any pump test indicates that the pump performance differs significantly from the Specification requirements and/or the previously submitted pump performance data, the cause of the difference shall be determined and corrected by the manufacturer. The pump shall be retested until it meets the performance requirements specified herein.

3. Motor Testing Requirements

- a. Pump motor shall be designed and manufactured according to the criteria specified in subsection 2.03 of this Section.
- b. Pump motor shall meet or exceed all applicable NEMA standards.
- c. The pump motor to be furnished under this Section shall be tested according to generally recognized "Standard Commercial Tests."
- d. The motor manufacturer shall not ship any motor until after the motor test information has been submitted to and reviewed by the Owner.

D. Field acceptance tests shall be performed as specified in PART 3 EXECUTION.

1.05 REFERENCES:

A. The latest editions of the following standards form a part of this specification:

American National Standard Institute (ANSI)

ANSI A21.1 Standard for Gray-Iron and Ductile Iron Fittings, 3-in through 38-in. for Water and Other Liquids.

ANSI A21.11 Standard for Rubber-Gasket Joints for Ductile Cast-Iron and Gray-Iron Pressure Pipe and Fittings.

ANSI A21.15 Standard for Flanged Cast-Iron and Ductile-Iron Pipe with Threaded Flanges.

ANSI A21.51 Ductile-Iron Pipe Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or Other Liquids. American Society for Testing and Materials (ASTM)

ASTM A48 Specifications for Gray-Iron Castings.

ASTM A53 Specifications for Pipe, Steel, Black and Hot-dipped, Zinc Coated, Welded and Seamless.

ASTM A108 Steel Bars, Carbon, Cold Finished, Standard Quality

ASTM D429 Rubber Property - Adhesion to Rigid Substrates

ASTM D1785 Polyvinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120. Massachusetts Electrical Code (MEC)

527 CMR 12.00 Massachusetts Electrical Code. National Electric Manufacturer's Association (NEMA)

NEMA MG1 Motors and Generators

1.06 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. Prior to shipment, the Contractor shall submit six copies of the following to the Owner:

1. Complete shop drawings showing dimensions, materials of construction, and all particulars as herein specified.
2. Certified pump curve showing the actual performance of the pump to be supplied under factory testing. The pump shall be tested with actual suction elbow to be furnished for this system as specified.
3. Complete Bill of Materials.
4. Proposed pump hydrostatic and performance testing procedures.
5. Complete test results on each motor from the routine tests as defined in the NEMA standard for a motor of its class and rating to determine that it is free from electrical and mechanical defects and to provide assurance that it meets the design specifications.
6. Pump Motor performance data for:
 - a. Guaranteed minimum efficiency at 100%, 75%, 50%, and 25% of full load.
 - b. Guaranteed minimum Power Factor at 100%, 75%, 50%, and 25% of full load.
 - c. Locked rotor and full load current.
 - d. Starting, full load, and breakdown torque.

7. Pump Bulletin
8. Pump and motor assembly drawings and motor frame size.
9. Pump and motor storage and installation instructions.
10. Installation drawings of pump, motor, coupling, base with component weights and dimensions.
11. Coupling installation instructions.
12. Coupling Bulleting and Drawings.
13. Maximum reverse runaway speed calculations.
14. Complete pump and motor nameplate information.
15. Certification of factory motor balancing.
16. Complete functional description of all system components.
17. Parts lists including the manufacturer's reference and ordering numbers.
18. Recommended spare parts list with ordering numbers.

- B. Furnish six (6) copies of "Operation and Maintenance" manuals of all equipment supplied and installed. Manuals shall contain, but not be limited to, a complete bill of materials, a preventative maintenance schedule, a list of troubleshooting information, assembly drawings with components clearly identified and numbered, parts lists, wiring diagrams, pertinent technical data and factory service information, warranties and emergency telephone number(s).
- C. Upon completion of installation, six sets of the results of the field and acceptance tests as specified under this section of the specification shall be submitted to the Owner.
- D. Furnish equipment manufacturer's notarized certificates of conformance with the specifications stating that all materials and equipment furnished under this Section conform with all specification requirements.
- E. At the discretion and expense of the Owner, an independent vibration analysis may be conducted on the new wastewater pump. The Contractor and manufacturer will be permitted to witness the test.

1.07 DELIVERY, STORAGE, AND HANDLINGS:

A. SHIPPING:

1. The wastewater pump, materials and spare parts shall be shipped complete and ready for installation except where partial disassembly is required by transportation regulations, is recommended by the manufacturer or for protection of components.
2. All anchor bolts and embedded items required for complete installation or mounting, holding down or supporting of equipment to be furnished under this section, including necessary location drawings and templates required to install the items in concrete, masonry, etc., shall be furnished and delivered to the site by the manufacturer of the equipment furnished under this section, for installation under other sections of the specifications. Delivery of these items shall be as required by the overall construction schedule.
3. Spare parts shall be packed in containers bearing labels clearly designating contents and pieces of equipment for which intended.
4. Spare parts shall be delivered to the site at the same time as the basic equipment and turned over to the Owner after completion of work.

B. STORAGE:

1. The Contractor shall receive, store, and safeguard all equipment, materials, and spare parts at the job site.
2. The pump motor shall be stored on-site and protected according to motor manufacturer's recommendations until the pump is operational and accepted by the Owner.

1.08 WARRANTY:

- A. The pump and motor manufacturer shall each individually and separately warranty that the equipment they supplied under this Section fully meets the criteria specified herein, and shall further warranty that the equipment is free from all defects in materials and workmanship.
- B. The manufacturer's warranties from defects shall contain a provision that the manufacturer shall repair or replace any defects, to the satisfaction of and at no additional cost to the Owner, for a period of twenty-four (24) months for the pump and motor, from the date of Substantial Completion of the project.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

- A. Fairbanks Morse

2.02 PUMPING EQUIPMENT SCHEDULE

- A. The contractor shall furnish and install vertically mounted, coupled, end suction, solids handling, centrifugal pumping unit as specified herein at the locations listed below:

Longfellow Road Pump Station (Pump no. 1) 1

The Pump Station pump shall have the necessary characteristics and be properly selected to perform under the following operating conditions:

Design Point	75gpm @ 58' TDH
Minimum Efficiency over Pumping Range	75%
Minimum Horsepower	7.5
Maximum Allowable Operating Speed, RPM	1,200
Minimum Spherical Solid Diameter to be Passed	3 inches

The existing pump and motor has the following model and serial numbers, and characteristics:

Pump

<i>Manufacturer:</i>	<i>Fairbanks Morse</i>
Model No.	5443B
Serial No.:	K2J1021611
Diameter:	4" Suction, 4" Discharge

Motor

<i>Manufacturer:</i>	<i>Marathon Electric</i>
Size:	7.5 horsepower, 240-volt, 3 phase, 60 hertz, 1150 rpm

2.03 PUMP:

- A. The centrifugal pump shall be a vertical close-coupled type unit. The unit shall include pump, high ring base, coupling, coupling guard and vertical solid shaft motor.

B. PUMP BASE:

1. The pump shall be supported by a cast-iron or fabricated steel pedestal base with openings large enough to permit access to the suction line to the inspection opening in the suction elbow. The base shall be rugged enough to support the full weight of the pump. The legs of the pedestal base shall be of such length that the suction elbow of the pump will not touch the floor or the level foundation upon which it is anchored.
2. The base shall be suitable for attachment to existing foundation materials. The pump manufacturer shall investigate the existing composite pump base support foundation pads, and provide such adapter plates and/or fabricated components as necessary to result in correct alignment of pump suction and discharge nozzles to existing piping connection points. The pump manufacturer shall provide all anchorage and attachment hardware for installation, leveling and securing base to the existing composite foundation. All leveling shims, anchor bolts, and associated hardware shall be 316 stainless steel.

C. CASINGS:

1. The pump casing shall be made of hard, close-grained cast iron conforming to ASTM A48, Class 30, of ample thickness, capable of prolonged resistance to the abrasive action of solids or foreign matter contained in the liquid passing through the pump. Ample and convenient access to the impeller and interior parts shall be provided by means of handholes, removable plates, or otherwise as approved.
2. Handholes shall be equipped with covers designed for easy removal. The interior surface of the covers shall be shaped to continue the contour of the interior of the casing to which it is attached so as to maintain efficiency and to prevent lodging of solids.
3. The high point of the casing shall be fitted with an air vent and the low point fitted with a drain.
4. The pump suction and discharge nozzles shall be drilled and tapped for installation of pressure gauges and the suction and discharge connections shall have flanges faced and drilled in accordance with the 125-pound American Standard.
5. The pump casing shall be tested under a hydrostatic head of at least 75 psi or 150 percent of the rated shut-off head, whichever is greater.
6. Pump design shall incorporate double suction wear rings, of the peripheral design, requiring no axial adjustment. One wear ring shall press-fit into the case, with the corresponding mating ring press fit onto the impeller. Wear rings shall be replaceable AISI 420 stainless steel.

D. SUCTION COVER / ELBOW

1. The suction cover/elbow shall be a separate cast piece, made of ASTM A48 Class 30 Cast Iron. The cover shall bolt in a register fit to the pump volute. The elbow shall incorporate a bolt-on contoured cleanout cover.
2. The suction flange shall be designed to accept an ANSI Class 125 lbs. flange of the size specified herein.

E. FRAMES:

1. The fronthead shall be made of close-grained cast iron conforming to ASTM A48 Class 30. The fronthead shall be cast separately and connected to the (suction elbow) combination base elbow).

2. The back head adapter shall be cast iron construction, flanged and machined on both ends to maintain alignment between the pump and driver and to eliminate vibration. The back head frame shall be built to allow for complete removal of bearings, shaft and impeller by unbolting it from the volute casing.
3. The main frame shall be made of hard, close-grained cast iron and shall be fitted to the casing with machine-faced joints. The design shall be heavy and rigid, so as to resist safely and without distortion the stresses due to impeller thrust and the bearing loads. The frame shall have housings for two sets of grease-lubricated ball or roller bearings. If ball bearings are used, at least one set shall be a combination radial and thrust bearing. Bearings shall be mounted in dust and moistureproof enclosures incorporating lip-type grease seal in contact with the shaft to prevent the entrance of contaminants. Jacking bolts for external impeller adjustments are required. Zerk-type grease fittings for bearing lubrication shall be supplied at the bearing housings.
4. A suitable drain shall be provided at the low point of the main frame.

F. SHAFTS:

1. The pump shafts shall be high strength, AISI 1144 steel or better, "Stressproof" treated for hardness and strength. It shall be Owned to transmit full driver horsepower with a liberal safety factor and minimum deflection. The shaft shall be accurately machined and polished, and statically and dynamically balanced. Minimum shaft diameter shall be not less than 2.125 inches. All steps in shaft diameter shall be radiused.
2. Shaft deflection shall not exceed 0.002 inches, as measured at end of suction wear ring, when operating at design conditions. Pump manufacturer shall submit a shafting stress analysis in support of same.
3. A replaceable shaft sleeve shall be provided, extending through the stuffing box, positively locked to prevent rotation, and sealed to the shaft utilizing an O-ring fit into an internal groove on the sleeve. The sleeve shall be a minimum of 0.375" larger in O.D. than the shaft, and be constructed of stainless steel, heat-treated to a minimum Brinell hardness of 350.

G. IMPELLERS:

1. The impeller shall satisfy the physical and tensile strength requirements of ASTM A48, Class 30.
2. The impeller shall be single-suction, symmetrical and statically and dynamically balanced, and of non-clog design. Non-clog impellers shall be built with a minimum number of vanes or blades and shall allow impeller waterways and clearance between the maximum size impeller periphery and volute cutwater to pass spherical solids as indicated in Section 2.02. Provision shall be made for external impeller adjustment without the use of shims.
3. Impeller vanes shall be free of sharp edges and waterways shall have smooth contours and well-rounded entrances. The impeller hub shall not have ports for reduction of thrust on the impeller. The impellers shall be key-seated and held securely to the shaft using a stainless steel washer and stainless steel lock screw, or by an equally efficient method which shall permit easy removal of the impeller and shall also be capable of holding securely in the event of pump reversal to full runaway speed. No positioning adjustment shall be required.
4. The impeller shall accept a radial press-fit wear ring which requires no "on site" external adjustments. External adjustments for the wearing surfaces shall not be accepted. Removable wearing rings made of stainless steel of different degrees of hardness shall be installed on the impeller and in the pump casing at the suction side. They shall be securely fastened to prevent any relative rotation, and shall be designed to compensate for a minimum of one-eighth inch wear. The casing wearing ring shall not contain less than 7 percent chromium.

H. BEARINGS:

1. Pump bearings shall be of the ball or roller type. Each pump shaft shall be supported by two sets of bearings suitable for the entire loads and arranged for grease lubrication. The outboard bearing shall be of the angular contact, duplex mounted type ball bearing for thrust and radial loads. The inboard bearing shall be of the spherical roller type, being self aligning.

2. The bearings shall be properly protected from corrosion during shipment and installation. Bearings shall be designed in accordance with the Anti-Friction Bearing Manufacturers Association, Inc. Standards for 40,000 hours minimum life at conditions of operation. All bearings shall have a minimum L-10 life of 100,000 hours.

I. MECHANICAL SEALS:

1. A backplate with deflector vanes constructed of ASTM A48 Class 30 Grey Iron shall be provided, including a single mechanical seal, John Crane Type 1 of material code BD80581 (Tungsten Carbide versus Silicon Carbide). The design shall allow for continuous operation without the need for external flush water or venting.
2. The seals shall be equipped with flushing assemblies. The volutes shall be tapped and ¾-inch brass piping shall be installed to convey water from the volute to the filter housings. Each filter housing shall contain a 10-micron filter. Water shall be conveyed from the filters to the seals through ¼-inch tygon tubing. A ball valve shall be installed on either side of the filters to allow the replacement as required.

J. FLEXIBLE COUPLINGS:

The coupling between the pump and motor shall be an all-steel grid type, flexible coupling, designed for both angular and parallel misalignment and free-end float, and shall be provided with means of lubrication.

K. MOTORS:

1. The motor shall be vertical, totally enclosed, fan cooled, premium efficiency, squirrel cage, induction type, rated for continuous duty operation. NEMA Class F insulation with NEMA Class B temperature rise based on a 40 degree C ambient temperature, 1.0 service factor for operation on variable frequency and capable of operating on 3 phase, 60 Hertz, 460 volt current. The motor shall be designed, manufactured and tested in accordance with NEMA standard MG1.
2. The speed and horsepower rating of the motor shall be as indicated in 2.02 PUMPING EQUIPMENT SCHEDULE. The motor shall have a KVA per horsepower rating of NEMA code letter G or lower.
3. The motor manufacturer shall certify in writing that the motors meet the limits for amplitude and velocity of vibrations as outlined by the manufacturer.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Installation of the pump and related appurtenances shall be performed in accordance with all written instructions furnished by the manufacturer.
- B. After installation, the Contractor shall clean all surfaces damaged in shipment or installation and shall touch up in the field with the same materials as the original coatings.
- C. The contractor shall modify the concrete base as necessary to ensure the pump suction and discharge lines match up to the existing piping. Concrete shall be as specified in section 03302 – FIELD CONCRETE.

3.02 FIELD ACCEPTANCE TESTS:

- A. After installation of the equipment and after completion of the services of the manufacturer's representative, the Contractor shall operate the unit to demonstrate its ability to pump without excessive vibration, overloading of the motor, or overheating. The pump shall be operated for a sufficient period of time to permit thorough observation of all pump components.
- B. Start-up and testing shall be conducted in accordance with Section 01752, STARTUP AND TESTING.
- C. Performance tests shall be conducted on the pumping unit installed. The tests shall be conducted for the parameter of head capacity, overall system efficiency, and overall system power requirements. These parameters shall be measured and documented in writing.
- D. All pumping equipment shall be tested to check for proper operation, proper alignment, faulty equipment, and for excessive vibration. The Contractor shall provide vibration testing by a qualified and independent testing company. This testing of the complete system shall cover all duty conditions outlined in this Section of the Specifications. The vibration testing shall be conducted in the presence of the pump and pump motor field service representatives in accordance with procedures outlined in the applicable sections of the Hydraulic Institute Standards.
- E. In the event vibration exceeds the specified limits and the cause of the vibration is attributable to the pumping equipment, the equipment manufacturers shall make the necessary balancing or alignment adjustments to bring the equipment to within the specified limits.
- F. The completed pump and motor installation shall be tested for sound generation in accordance with the Hydraulic Institute Standards for sound measurement from pumping equipment.
- G. Any and all alterations, modifications, additions and/or work necessary to rectify defects or non-conformance with this Section of the Specification shall be in such a manner as to provide for the satisfactory operation of the pump and pump motor, all at no additional cost to the Owner.
- H. All defects and defective equipment shall be corrected or replaced or corrected by methods approved by the Owner, promptly at the Contractor's expense.
- I. All final adjustments necessary to place the equipment in satisfactory working order shall be made prior to the tests.
- J. If sufficient sewage is not available for the test, the Contractor shall provide water for testing. The Contractor shall furnish all labor and materials necessary for the test.
- K. After installation, all piping connections shall be tested for tightness in an approved manner. Should leaks be found, faulty joints shall be repaired, even to the extent of disassembling and remaking the joint, and all defective pipe and fittings shall be removed and replaced in a manner satisfactory to the Owner.

3.03 SPARE PARTS:

- A. The Contractor shall furnish and deliver to the Owner at the site of the work the following spare parts, all of which shall be identical and interchangeable with similar parts installed in the work.
 - 1. One set of gaskets required for each pump.
 - 2. One complete set of wearing rings for each impeller and bearing.

END OF SECTION

SECTION 01752
STARTUP AND TESTING

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section includes the startup and testing services required for the pump station during system startup.

1.02 SYSTEM DESCRIPTION:

- A. The Contractor shall perform pump station startup to the satisfaction of the Owner. Startup and testing shall not be initiated until all required certifications and other required documentation has been submitted, as described herein.
- B. The purpose of the startup test is to provide a final operational checkout of all equipment prior to beneficial use by the Owner.
- C. As most components of each pump station are interrelated, substantial completion of the project shall not be certified until successful completion of startup.

1.03 SEQUENCING:

Testing, operator training and other like services to be provided under the technical sections of the specifications are not to be performed during startup without written authorization from the Owner.

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF THE GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

- A. Three copies of the following shall be forwarded to the Owner for review two (2) weeks prior to commencement of startup:
 - 1. Certification by a representative of the manufacturer that each piece of equipment has been installed properly and is ready for operation.
 - 2. Certification by a representative of the equipment manufacturer that all equipment requiring calibration has been properly calibrated.
 - 3. A schedule of the testing, including staffing, and specific testing and operation of individual equipment items.
- B. At the conclusion of the test, all information recorded during the test shall be forwarded to the Owner.
- C. This test is not to be utilized as a general debugging of the system. All equipment shall be started, tested and calibrated prior to this test. This includes automatic and manual operation as well as instrumentation interfacing.

PART 2 - PRODUCTS - NOT APPLICABLE

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Prior to commencement of testing, the Owner shall be given three (3) days' written notice.
- B. The Contractor shall complete final debugging prior to startup.
- C. All telemetry equipment shall be operational prior to testing.
- D. The test shall be performed.

3.02 TEST PROCEDURES:

- A. It is the general responsibility of the Contractor to insure that all equipment is completely operational throughout the test; provide the Owner with proper technical assistance as required to completely test all equipment and alarms; provide adequately trained personnel who can operate the pump station on an on/off basis so that the equipment is not damaged, whether the Owner or Owner is present or not during that portion of the test.
- B. It is the general responsibility of the Owner during the test period to supervise the testing of all equipment, associated alarms and devices; to vary the operation of the equipment as necessary, and to pump as required.

3.03 STOPPING OF TEST:

- A. The Owner shall stop the testing for any of the following reasons:
 - 1. Failure of critical system, including:
 - a. Pump
 - b. Pump Motor Control
 - 2. Failure of any of the above systems to operate on standby power.
- B. If the test is stopped for any reason, the test shall be restarted from the beginning. The Contractor shall pay all costs associated with the Owner supervising additional testing as required.

END OF SECTION